

The Koala and Possum Trade in Queensland, 1906-1936

Frances Hrdina¹ and Greg Gordon^{2,3}

¹30/38 Dundee Rd, North Maclean Qld 4280.

²Queensland Parks and Wildlife Service, PO Box 155, Brisbane Albert St Qld 4002.

³Address for corresponding author: PO Box 636, Paddington Qld 4064; ggordon@gil.com.au

ABSTRACT

In this paper we discuss the history of the koala and possum fur trade in Queensland, based mainly on material in Queensland Government archives, and review the development of legislation and wildlife management practices. The koala and possum harvests arose in response to a large increase in the abundance of koalas and possums in mid to late 19th century. A marked increase in skin prices in the early 20th century provided further stimulation to the harvests. Harsh rural conditions and economic downturns further raised interest in harvesting and the government regularly came under pressure to open trapping seasons for economic reasons. Regulated koala harvests operated intermittently from 1906 to 1927, whereas possum harvests were held more frequently and over a longer period, from 1906 to 1936. Fluctuation in demand was a major influence on the industry, leading to the expansion of the industry after 1900, and the eventual demise of the possum industry in the 1930s. Strong demand over about three decades resulted from a range of factors influencing the international fur markets, associated in particular with warfare and economic conditions after World War I.

Successive Queensland governments supported the harvest because of its economic value, despite having serious concerns about the viability of the koala harvest. The legislation to control the harvest was aimed at protecting possums and koalas from extinction and establishing a sustainable industry. The principal legislative devices used to manage the harvest were close seasons and establishment of sanctuaries, supported by various other measures. Animals were taken by baiting (cyanide), snaring and shooting. Control measures were ineffective in preventing breaches of the regulations, and widespread take occurred during close seasons. The Department of Agriculture and Stock attempted to manage the trade as a sustainable harvest, with annual assessment of populations, and determination of open seasons in response to population levels and market conditions. The harvest was supported by population conservation measures including the establishment of reserves and attempts to conserve populations with a restocking (translocation) program for both koalas and possums in areas thought to be over-harvested. Koalas and possums were translocated to a number of mainland sites and onto islands.

The take of possums ranged from about 400,000 to 3,000,000 per annum and that of koalas from about 450,000 to nearly one million. In good seasons, top quality skins could bring at least 60 shillings per dozen. The poorest quality skins brought as little as 2½ pence each. The industry was of considerable economic value, generating personal incomes substantially greater than the income from wages of many workers, and total returns comparable to those of the annual sales of gold for the State. The total number of trapping permits issued in a season varied from about 8,000 to over 9,000.

Governments had serious reservations about the koala harvest, but supported the possum harvest much more strongly. Possum harvests were held more frequently, generated more income, and made an important contribution to the economy. Strong community opposition to koala harvests first arose in 1919, effectively signalling the end of the harvest for that species. By 1936, community opposition to the possum seasons had also become established. There was a market downturn at the same time and the possum harvest came to an end. Significant community opposition to harvests of both species arose in both urban and rural areas, the latter mainly because harvests were seen as interfering with grazier interests, causing death of stock from cyanide baits and disturbance to stock by shots and spotlights.

Key words: Koala, possum, fur trade, wildlife harvest, *Phascolarctos cinereus*, *Trichosurus vulpecula*, *Trichosurus caninus*, *Pseudocheirus peregrinus*, sustainable use.

Introduction

In this paper we discuss the history of the trade in Koala *Phascolarctos cinereus* and possum skins in Queensland, based mainly on material in the archives of the Queensland Government. (The main possum species used in the trade were the Common Brushtail Possum *Trichosurus vulpecula*, Mountain Brushtail Possum *T. caninus* and Common

Ringtail Possum *Pseudocheirus peregrinus* - see discussion below. Unless indicated otherwise, the terms "possum" and "opossum" refer to all species used in the trade.) We also examine the reasons for the eventual collapse of the industry. The possum skin industry in Queensland has been largely forgotten and is rarely mentioned in connection

with skin harvesting, although it became regulated at the same time as the trade in koalas. There has been renewed interest in Australia in the sustainable use of native wildlife. For example, the Rural and Regional Affairs and Transport References Committee, a committee of the Senate of the Commonwealth Parliament, held an enquiry into the commercial utilisation of native wildlife (Parliament of the Commonwealth of Australia 1998). The Environment and Natural Resources Committee of the Victorian Parliament also held an inquiry into the utilisation of Victorian native flora and fauna (Environment and Natural Resources Committee 2000). Scientific interest in the topic has been shown in recent publications on ecologically sustainable use of wildlife (Grigg *et al.* 1995; Bomford and Caughley 1996; Bolton 1997; Archer 2002; Grigg 2002; Webb 2002). The Queensland trade in koala and possum skins is an example of an early attempt at the sustainable use of native wildlife.

Previous accounts of the skin trade, although informative, have been written by opponents of the industry, are polemical in nature and are often subject to serious problems of misinterpretation of information and over-simplification. When the taking of these species for skins is mentioned, it is generally in relation to koalas and the 1927 open season (Marshall 1966; Howlett 1979; Lines 1991; Bolton 1992;

Hutton and Connors 1999; Donegan 2000). The most comprehensive discussion of the koala trade is provided by Marshall (1966) and Howlett (1979). These accounts often demonstrate ignorance of basic biology when dealing in particular with hunting, population processes, population limiting factors and ecology. They show naivety about animal population processes and population response to harvests, with an assumption that harvest automatically leads to declines. Native fauna harvests from this period are often portrayed as simple, savage, exploitative slaughter almost to the point of extinction, whereas the harvests that we have investigated had a more complex basis. Donegan (2000, p 36) for example, although complaining of the "extractive and utilitarian mentality that most white Australians harboured towards the environment", clearly demonstrates just the opposite, at least where koalas are concerned, in her account of the overwhelming strength of community opposition to the koala trade (Donegan 2000, pp 42-43).

Gordon and McGreevy (1978) discussed the timing of koala seasons, disposal of illegally taken skins and disease in koalas. They also found that populations of koalas still occurred in the area of central Queensland that included the electorate of Leichhardt, which was a stronghold of the trapping industry. Places mentioned in the text are shown in Figure 1.



Figure 1. Queensland, Australia - places mentioned in the text.

Koala and possum harvests also occurred in the other states. Victoria had harvests of brushtail and ringtail possums until the late 1950s (Kerle 2001). The only remaining harvest is the Tasmanian possum harvest, described in the *Management Program for the brushtail possum* *Trichosurus vulpecula* (Kerr) in *Tasmania* (Tasmanian Parks and Wildlife Service 1999).

Sources of information

Correspondence files of the Queensland Department of Agriculture and Stock from 1906-37 were searched for information on the harvests. We also searched through parliamentary debates, annual reports on the Acts, shire histories and newspapers. The Fauna Acts were published in the *Votes and Proceedings of the Queensland Legislative Assembly* and its replacement, the *Queensland Parliamentary Papers*, held in the Queensland State Library and the Queensland State Archives. The legislation was also printed in the *Queensland Government Gazette*. The annual reports on the Fauna Acts were included in the Annual Reports of the Department of Agriculture and Stock in the same collections. Debates on the Acts are found in Queensland Hansard. The general correspondence files of the Department of Agriculture and Stock, stored in the Queensland State Archives, have correspondence and newspaper clippings, including information on the number of skins traded and the prices obtained. Copies of newspapers are also found in microfilm in the Queensland State Library.

Although index card files of the Department of Agriculture and Stock list numerous letters concerning the open season for possums and koalas during the period 1912 to 1918, these letters have not been archived, and apparently were discarded. When opposition arose to the 1919 koala season, open seasons generally became a more political matter, and from 1919 onward files relating to open seasons were kept and are held in the State Archives. In addition, from the early 1920s, officers of the Departments of Agriculture and Stock, Lands and Police were requested annually to comment on the status of koalas and possums in their districts, resulting in more information becoming available on the harvests from that time. Historical material is cited in the text with footnotes. Most historical material was found in the Queensland State Archives. Material from the Queensland State Archives is cited with the bundle number and file number, e.g. "AGS/J201 file 2003". All correspondence of the Department of Agriculture and Stock for a given year is indexed in the card file, AGS/B Agriculture. A list of the AGS/B file numbers for each year is found in the Accessions Register Volume 10.

Overview of the fur trade

The industry before regulation (pre 1906)

Extensive anecdotal evidence indicates that koala populations in eastern Australia underwent a large increase in abundance from mid to late 19th century (Parris 1948;

Warneke 1978; Martin and Handasyde 1999; Gordon and Hrdina 2005). It is likely that the increased abundance made possible the development of the koala skin industry. The common brushtail possum probably experienced a similar upsurge in abundance (Jarman and Johnson 1977), which enabled the development of a substantial fur harvest.

We have found little information on the early days of the koala and possum industry in Queensland. It appears to have commenced as a major activity towards the end of the 19th century. Warneke (1978) and Martin and Handasyde (1999) provide information on the early years of the koala skin trade in Victoria. At Bega in New South Wales, trade in koala skins was common from about 1870 through to possibly the early 1900s, and the possum trade operated over a similar period (Lunney and Leary 1988). Substantial numbers of skins were taken. In 1891, over 3,000,000 opossum skins were sold in the London markets and in 1903, about 3,250,000 were sold in New South Wales (Froggatt 1904). In 1889, *The Sydney Morning Herald* reported that 900,000 opossum skins had been sold in the London markets¹.

Fletcher *et al.* (1959, pp 20-21) describe the early days of the koala and possum harvest in the Ballandean region in southern Queensland. Possums were abundant there from at least the late 1860s and they sustained a harvest into the 1930s, which was comparatively very profitable during the depression years, but they had become rare following the last open season in 1936. Koalas were also very numerous in the 1890s, but were rare by the turn of the century and no longer supported an industry in that district. Fletcher *et al.* (1959) wrote, "Although it seems a terrible thing to have ever allowed their destruction, the taking of koalas in the extremely hard times of the 1890's, did provide a means of earning something."

Better documentation of the size and nature of the industry became available once the skin industry became regulated under the early fauna Acts after 1906. This paper concentrates on that period.

Factors driving the harvest

Several factors led to the development of the possum and koala harvest, including high abundance of koalas and possums, rural and economic conditions, and strong market demand. A major reason for opening the harvests was the great abundance of koalas and possums (Gordon and Hrdina 2005), and high abundance continued to drive the harvests.

Rural and economic conditions

There was strong rural sentiment that viewed the koala and possum industry as a standby source of income for rural people when times were hard, especially the small selectors. A letter from Joseph Maguire, a labourer of Miles, to the Minister for Agriculture and Stock in 1923 concerning a possible possum season, stated in reference to possum skins, "Last year ... Miles people got great benefit from them as you can always get cash for them and no trouble to get

¹ The Sydney Morning Herald, 31/1/1889.

² Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003, 1923. Letter from J. Maguire, Miles, 7/5/1923.

credit". Maguire summarised the concerns of many rural workers in his letter, "As we are suffering from a continuous drought it is impossible to get any work. The cattle market is dead. The cotton mostly failed just for the sake of a shower or two. The dairying is at a standstill so the only bright spot is open season for opossum. There are several men here like myself with big families & no prospects for perhaps a cold winter. Its only a matter of a little while & the pear poison will clean them [referring to possums] up for good." ("Pear poison" refers to poisoning of the invasive weed prickly pear, *Opuntia* spp.) In the later years of the trade, the harvest was also seen as a source of income for the unemployed. The Queensland Government came under considerable pressure to open koala and possum seasons in response to poor economic conditions.

Markets

Demand for Australian koala and possum skins increased following the Russo-Japanese war (1904-05). Demand was volatile over the following three decades, but was sufficiently high to support continuing harvests. Pressure to supply the markets came from dealers and from people who were keen to develop an ongoing, sustainable skin industry. The Queensland Government recognized that the market for skins was a source of valuable export income for the State and there was a strong desire to develop the harvest into a permanent, sustainable industry.

Participants in the debate

Groups involved in the debate over the koala and possum trade included squatters, selectors, trappers, the unemployed, politicians, the public service, conservationists, scientists and the general community. However, there were four major interest groups: rural people seeking an alternative source of income, graziers wishing to keep trappers off their properties, proponents of a sustainable industry, and conservationists and opponents of killing wildlife. In electorates where possum trapping was an industry, trappers regularly lobbied their members for an open season with letters and petitions, especially if there had been no season in the previous year.

However, many letters in favour of open seasons also came from property owners, possibly small farmers or selectors, and it was very common for property owners and their workers and families to take part in the harvests. Property owners appeared to be divided on this issue, possibly along the lines of squatters versus selectors, or owners of large properties versus owners of small properties. Protests against koala open seasons were consistently made by primary producer organisations such as the United Graziers' Association of Queensland, citing problems caused by trappers on properties, and expressing sentiment for the koala. Similarly, many shire councils, organisations that possibly were dominated by grazier interests, commonly opposed koala seasons.

One of the most active and regular proponents of open seasons was Thomas A. Foley, the Labor member for Leichhardt (1919 to 1932), Normanby (1932 to

1950), and Belyando (1950 to 1957). These electorates encompassed the area of central Queensland that included the Clermont, Emerald and Springsure regions. Other politicians do not appear to have had a high public profile in the debate beyond making representations on behalf of their constituents. Presumably they were more active behind the scenes.

From about 1919, the media became strongly opposed to koala seasons, and later (in the mid 1930s) to possum seasons. The press published numerous letters opposing the seasons together with sympathetic lead articles.

The Department of Agriculture and Stock regulated the trade in koala and possum skins. At senior levels, the Department was strongly concerned over the trade from the very beginning of regulation, showing a desire to place the harvest on a sustainable basis (in recognition of the economic value of the trade to Queensland) and strong apprehension about the impact of the trade on both koala and possum populations. At lower levels in the public service, other departments were involved including the Department of Lands and the Police Department. From the early to late 1920s, officers of all three departments were required to report on koala and possum abundance before a decision was made on the opening of a season. Their responses imply that they were largely opposed to the industry.

The value of the trade was supported by the Queensland Agent General in London, and by skin dealers, both of whom encouraged the development of a permanent harvest and a continuing export industry. Other proponents of the development of a permanent harvest included senior officials of the Department of Agriculture and Stock, Thomas Foley, some trappers, and some Department rangers. There was also some support from biologists, such as A.S. Le Souef, for establishing a properly managed sustainable harvest (Howlett 1979).

The debate over the fur trade

Concern over the impact of the harvest on possums and koalas was a major factor in the implementation of the first Act in 1906. The Department of Agriculture and Stock frequently expressed concern over possible rarity or extinction of both species due to over-harvesting. In 1911, the Department held an inquiry into the status of possums throughout Queensland, and whether the trapping of possums had any effect on the labour market.³ The replies were mainly of the opinion that, under existing conditions, possums would soon be practically extinct. Some replies indicated that extinction would be delayed if the use of cyanide could be prohibited so as to reduce the size of the harvest. Cyanide poison was commonly used to harvest possums, killing large numbers of animals (see below).

The effect of closer settlement on possum numbers was noted in the Annual Report of the Department of Agriculture and Stock in 1911-12, which stated that, "the progress of settlement itself seems to diminish the number of opossums".³ It reported that the opossum was commercially extinct in Brisbane and Beenleigh. They had become scarce

³ Department of Agriculture and Stock, Annual Report 1911-1912. Native Animals Protection Act pp. 27 - 28. Queensland Parliamentary Papers 1912.

at Beaudesert, in the Brisbane Valley area, at Gatton and Helidon and much of the Darling Downs and in the south-western districts including Cunnamulla and Charleville. All of these areas are in southern Queensland. Animals were still plentiful enough to be trapped in the Burnett and in the Central Districts and further north.

In 1912, the Annual Report of the Department stated, with regard to the possum trade, "In other countries this question of animal preservation is looked upon as being important. But here, in this country of Queensland, apathy upon the subject would seem to be the rule"³. From the beginning of regulation, the Department predicted the imminent extinction of the native bear and opossum in many of the departmental Annual Reports issued during the harvest years, effectively criticising the government policy of harvesting these animals and admitting that safeguards against over-harvesting were ineffective. The Annual Reports commonly refer to the trade with emotive terms like "wholesale slaughter" and "extermination". This seems extraordinary by modern standards, where the public service does not usually voice public opposition to Government policies. Following the 1919 season, the Under-Secretary of the Department wrote to a parliamentarian, "so far there were 2 3/4 [2.75] millions of Opossum skins and 3/4 [0.75] of a million Bear skins passed through the market ... and to these must be added the figures yet to come and the many thousands of animals that were never recovered after slaughter. These figures are somewhat appalling and force consideration towards preventing the extermination of these animals. ... I am now considering as to what is best to be done under the circumstances and also to prevent extermination"⁴. In 1920 the Annual Report stated that the large numbers of opossums and bears taken "clearly show that the extermination of native animals of these kinds is in sight"⁵ and other Annual Reports have similar statements. In 1921 the Annual Report described the "deplorable" destruction of wildlife in parts of north Africa and Europe and stated that similar circumstances prevailed in Queensland where the question was "not one of preservation of the fauna, but what is the commercial value"⁶.

There were relatively few koala seasons, and they occurred at wide intervals: two brief seasons in 1907 and 1908, then three seasons in 1915, 1917 and 1919, and the final season of one month in 1927 (Table 1). The koala season was closed for six years from 1909-1914, said to be due to concern over the high level of take in 1907-08⁴. Possum seasons in contrast were operated commonly from 1907 to 1931 (Table 1). The low number of koala seasons may imply that Governments did not really accept the koala industry as a legitimate industry due to concern over over-harvesting, possibly opening seasons mainly in response to

political pressure, whereas they did accept and support the possum harvest.

The 1915 koala season may have been opened as a direct result of the Labor party coming into government then. Before that, Labor held office in Queensland for two brief periods only - three months in 1904, and one week in 1899. The first two open seasons (1907, 1908) were followed by protection from hunting from 1909-1914, during a period of non-Labor Government. Labor came into government in May 1915 and opened the koala season in June. This may have been an attempt to assist Labor's rural voter base. The Labor Party in Queensland at that time depended heavily on support from rural labourers and small farmers, promoting agrarian socialist policies and closer settlement by small farmers, and Labor appeared more sympathetic to harvests, presumably in response to its rural worker constituency (Fitzgerald 1984, Fitzgerald and Thornton 1989). After attaining office, the Labor Government opened three koala seasons biennially (1915, 1917 and 1919), and then backed away from koala harvests until 1927. In that year the Government opened a final season, possibly to let trappers dispose of their illegal skins. It is of interest that the Cabinet Recommendation for the opening of the 1927 koala and possum season (Figure 2) was initialled by only four Cabinet Ministers. The strong protests in 1919 probably were the main factor leading to the closing of the seasons until 1927, aided by serious high level alarm over the number taken in 1919. Labor was in government from 1915 to 1929 and this was probably a factor in the continuation of koala open seasons in Queensland after they had been closed in other states.

Trappers, and Australian Labor Party supporters in particular, lobbied for the opening of seasons with letters to members of Parliament. The trapping advocacy was partly a workingman's lobby and sometimes expressed strong anti-squatter sentiment. Trappers felt, apparently correctly, that squatters would automatically oppose their interests. As late as 1930, trappers made pleas for the opening of a koala season, citing poor economic conditions⁷. The value of the industry was also recognised by many other people who were prominent in advocating the development of a permanent, sustainable harvest for economic reasons, and this view drove much of the policy that arose to regulate the harvest.

Mr Foley, the Labor member for Leichhardt, accompanied delegations from his electorate pressing for the opening of trapping seasons for possums and koalas in 1924, as well as being part of a deputation of members of Parliament in 1922 that argued that the possum season should be opened to ease unemployment⁸. In 1925, he

⁴ Queensland State Archives: Department of Agriculture and Stock AGS/J110 file 80. 1920. Letter from Minister to G.P. Barber, 17/1/1920.

⁵ Department of Agriculture and Stock, Annual Report 1919-1920. Native Animals Protection Act p. 22. Queensland Parliamentary Papers 1920.

⁶ Department of Agriculture and Stock, Annual Report 1920-1921. Native Fauna and Birds p. 18. Queensland Parliamentary Papers 1921.

⁷ Queensland State Archives: Department of Agriculture and Stock AGS/J733 file 3604/1666, 1930. Letters from M. Quinn, 28/4/1930, H.L. Black, 30/4/1930.

⁸ Queensland State Archives: Department of Agriculture and Stock. 1922: AGS/J150 file 379. Notes on a deputation to the Minister for Agriculture, 21/4/1922. 1924: AGS/J262 file 2003D. Memo from Mr Gillies re meeting with Mr Mattingley, 31/1/1924.

Table 1. Dates and periods of possum and koala open seasons - 1 November 1906 to 31 December 1936. Over the koala harvest period of 20 years 10 months, the total time the season was open was 1 year 9 months 11 days. Over the possum harvest period of 29 years 9 months, the total time the season was open was 6 years 18 days.

Year	Koala open season			Possum open season		
	Dates when open	Period when open	Prior closed period	Dates when open	Period when open	Prior closed period
1906	closed from 1 Nov.			1 Nov - 31 Dec	2 months	
1907	1 May - 5 August	3 months, 5 days	6 months	1 May - 31 Oct	6 months	4 months
1908	1 July - 31 Oct	4 months	10.8 months	1 May - 31 Oct	6 months	6 months
1909	closed			1 May - 31 Oct	6 months	6 months
1910	closed			1 May - 31 Oct	6 months	6 months
1911	closed			1 May - 31 Oct	6 months	6 months
1912	closed			closed	closed	
1913	closed			closed	closed	
1914	closed			closed	closed	
1915	25 June - 31 Oct	4 months, 6 days	79.8 months	25 June - 31 Oct	4 months, 6 days	43.8 months
1916	closed			1 July - 31 Oct	4 months	8 months
1917	1 August - 31 Oct	3 months	19 months	1 May - 31 Oct	6 months	6 months
1918	closed			1 May - 31 Oct	6 months	6 months
1919	1 April - 30 Sep	6 months	17 months	1 April - 30 Sept	6 months	5 months
1920	closed			1 April - 31 July	4 months	6 months
1921	closed			closed		
1922	closed			1 May - 30 June	2 months	21 months
1923	closed			1 June - 31 July	2 months	11 months
1924	closed			closed		
1925	closed			closed		
1926	closed			1 June - 31 July	2 months	34 months
1927	1 Aug - 31 Aug	1 month	94 months	1 Aug - 31 Aug	1 month	12 months
1928	closed			closed		
1929	closed			8 July - 7 Aug	1 month	22.2 months
1930	closed			closed		
1931	closed			27 July - 7 Sep	1 month 12 days	23.6 months
1932-1935	closed			closed		
1936	closed			1 July - 31 July	1 month	57.8 months

wrote a long letter to the minister objecting to the lack of an open season that year and justifying harvests⁹. Mr Foley presented the most sophisticated arguments about the koala harvest of any of the participants, justifying harvests with arguments based on differential habitat use, estimated rates of increase in population size, minimum population thresholds for harvests, and trapper behaviour. Although his ideas were sometimes erroneous, he was one of the few people involved in the debate who recognised the complexity of animal population ecology and of wildlife harvesting programs.

Mr Foley correctly pointed out that if trapping were not properly policed, koalas would still be widely trapped during protected periods, with the skins stored until a season was opened. He also stated that animals could only be profitably hunted on open, flat country, which would be restocked by animals migrating from hilly,

closely timbered areas nearby, which provided a refuge against over harvesting. He stated erroneously that females produced up to two young a year (the maximum is one young per year), basing his population increase figures on this assumption, and arguing that breeding would rapidly compensate for population decrease due to the harvest. He also ignored the loss of koala and possum habitat that resulted from closer settlement and clearing, and its effect on their numbers⁹. When the last open season for koalas was proclaimed in July 1927, he wrote a letter to *The Brisbane Courier* in defence of the season, reiterating several of his previous arguments¹⁰. He was rapidly taken to task and castigated by the readers in letters to the paper.

Community protest against the koala harvest

Before 1919, there does not appear to have been any strong community opposition to the koala trade, although

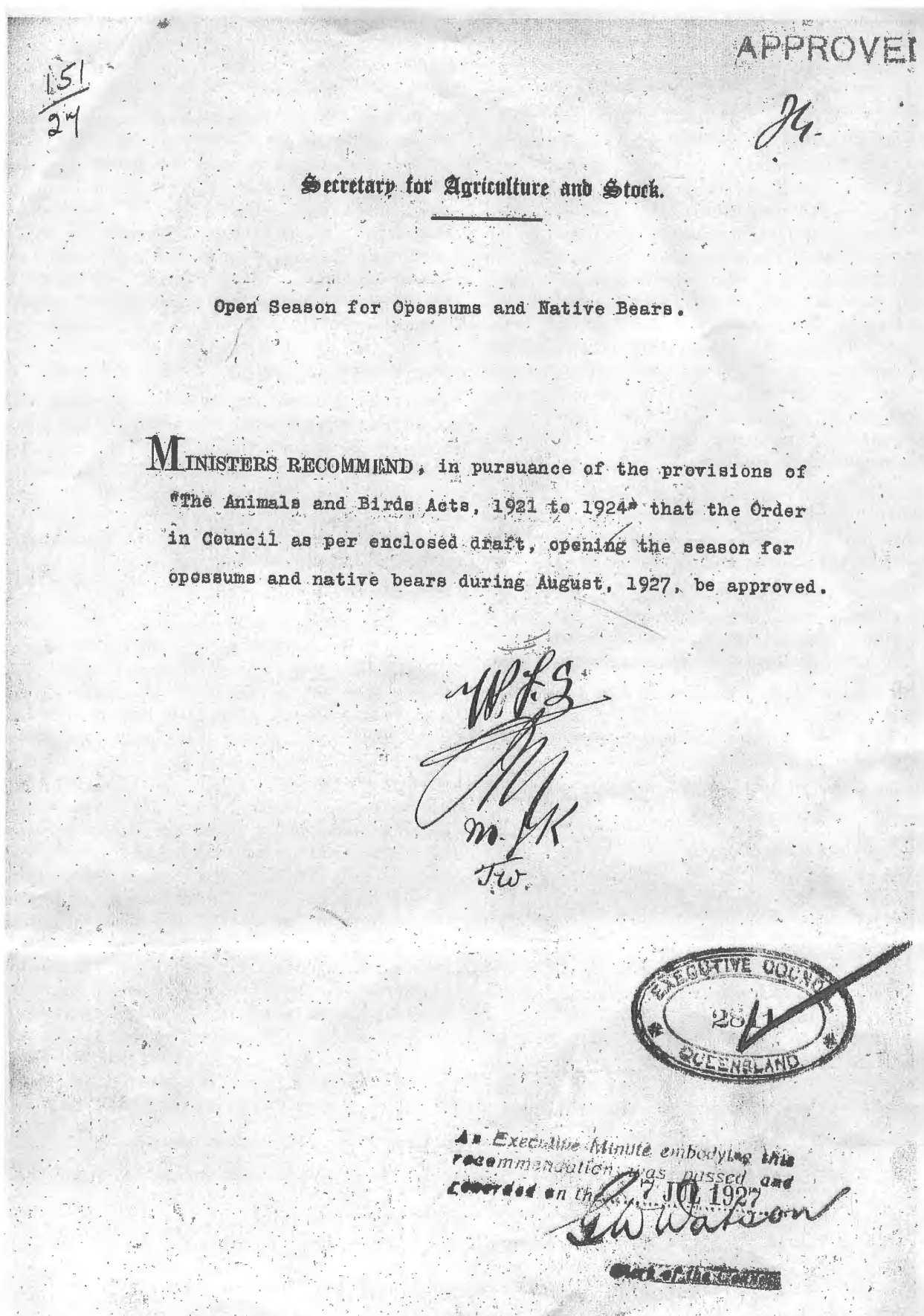


Figure 2. Cabinet recommendation for the opening of the 1927 koala and possum season. (Queensland State Archives: Department of Agriculture and Stock. AGS/E46 file 151. 1927.)

individual voices of protest were heard. Possibly public attention was preoccupied with the war (World War I, 1914-18). However, with the 1919 open season, community opposition to the koala trade developed rapidly. The possum harvest still generated little controversy at this time.

A feeling that the koala was harmless and inoffensive had replaced a desire for the income that its skins would bring into the community. Although petitions and letters in favour of an open season were sent, they were outnumbered by letters and petitions opposing an open season. At this time, parliament and politicians were in receipt of petitions and letters opposing an open season for koalas from school children, primary producer organizations (United Grazier's Association, Queensland Producers' Association), the Country Women's Association, Churchmen, Chambers of Commerce, scientific groups, native fauna protection groups, Shire Councils, prominent people such as Alec Chisholm, Noel Burnet (Koala Park), Henry Tryon (Government Entomologist) and David Stead, and the citizens of Dalby among others.

In 1922, even the Minister for Agriculture and Stock expressed alarm about the trade. Mr Foley, Member for Leichhardt, and Mr Gillies, the Minister, had the following conversation before the 1922 possum season:

Mr Foley - "If the season was opened now it would ease the position a lot. My people contend that there is no possibility of wiping them out in two or three months. They will breed more than is ever trapped."

Mr Gillies - "Yes, but I am looking at these figures. Five and a quarter million [possum] skins and one million bear skins. I didn't think there were a million bears in Queensland"⁹.

However, Mr Gillies, the Minister, subsequently opened another possum season in 1922.

In 1923, the prominent naturalist, Alec Chisholm, again protested against opening the season for both koalas and possums. He stated that in the south there was a growing feeling of alarm at the position of these animals throughout Australia generally¹⁰.

In 1927, when the last brief open season on koalas was declared, protests came not only from within Queensland, but throughout Australia. *The Brisbane Courier* for July 1927 had many letters protesting against the open season for koalas. Marshall (1966), Howlett (1979), Howells (1996) and Donegan (2000) give an extensive description of the public campaign against this season,

providing further references to the extensive and strong public opposition to the 1927 season. A number of people pointed out the season was really only an excuse to clear skins obtained illegally since the last open season¹².

In August 1928, the Nature Lovers League (a young persons section of the Queensland Naturalists' Club) wrote to Shire Councils, Dingo Boards and municipal Councils with questions on the number of koalas in the state, and whether they were in favour of protection. Of the 102 replies received, the only council not in favour of protection of the koala, excepting the 15 shires and town councils where no koalas were found, was Belyando Shire Council, which was in Mr Foley's electorate. Seventy-nine respondents were in favour of permanent protection, six felt the koala should be protected for at least five years and one was against opening the season the next year¹³.

The *Fauna Protection Act 1937* gave complete and permanent protection to the koala. It was much applauded in the press¹⁴. The Bill and the protection of the native bear were the subject of an editorial in that paper which called the 1927 open season "a piece of State-sanctioned vandalism destructive of a national asset, shocking in its cruelty, and the more reprehensible because its motive was wholly mercenary"¹⁴.

Opposition to the possum harvest

Throughout the 1920s, public opposition to the fur trade centred on the koala harvest. In the 1930s public concern shifted to the possum harvest. Possums were harvested relatively frequently up until 1931, following which there was a break of four years (Table 1). In 1936 the final open season was declared. By this time, possum open seasons were no longer only of concern to a few trappers and public opinion was turning in the possum's favour. Many now saw the possum, like the koala, as harmless and inoffensive. In addition, forestry officers, farmers and graziers began to feel possums had real value as consumers of mistletoe and sawfly larvae, both of which were regarded as serious pests of trees. Many people felt that the decrease in numbers of possums and koalas was responsible for an increase in mistletoe infestation and vigorously opposed the 1936 open season for possums on these grounds. The Forestry Department sent a letter to the Department of Agriculture and Stock pointing out the value of possums in controlling mistletoe and sawfly larvae, and emphasising that no trapping was allowed on State Forests, National Parks, Scenic and Timber Reserves¹⁵. This position was based on a trial with mistletoe as a food source for possums and koalas.

⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 54513. 1925. Letter from T. Foley, M.L.A. concerning closure of opossum and native bear season, 27/3/1925.

¹⁰ *The Brisbane Courier*, 21/7/1927, p. 9. Letter from Mr T. Foley.

¹¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 23/2003. 1923. Letter from letter A.H. Chisholm, 14/3/1923.

¹² *The Brisbane Courier*, 21 July 1927 p. 9, 25 July 1927 p. 15, 27 July 1927 p. 7. Letters to the Editor.

¹³ Queensland State Archives: Department of Agriculture and Stock. AGS/J565 file 29/604. 1929. Letter from D.A. Herbert to Minister for Agriculture and Stock 25/2/1929.

¹⁴ *The Courier-Mail*, 7/10/1937. Editorial.

¹⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J1079, file 3760. 1936. Letter from Queensland Forest Service to Under Secretary about control of mistletoe by possums, 4/3/1936.

In 1937, H.E. Young, Assistant Research Officer, presented these results to the Secretary of the Sub-Department of Forestry¹⁶ (Appendix 1). Items appeared in the newspapers opposing possum seasons both for these reasons and due to the cruelty of the trade. Letters stressing the value of possums in this regard came from many other people as well as the Forestry Department. In 1929, the Government excluded Westgrove Holding, an area of 400 sq. miles (1036 s.km.) in the Maranoa District, from possum trapping as an experiment in determining the efficiency of the possum in controlling sawfly¹⁷.

The headings in newspapers at the time indicate the change in public opinion. As with the koala, these began to change from favourable headings such as, "Trapping Season Opens", to unfavourable headings such as, "Slaughter of Possums" and, "Harmless and Useful". The United Graziers' Association of Queensland sent a letter to the Minister in 1936 opposing any open season for possums, pointing out once again the interference trappers and shooters caused to prime, fat cattle, saying "and it resolves itself into a question of whether the Beef Industry is of more importance to the State than opossum trapping or shooting"¹⁸. Other letters also objected to an open season because of loss of both cattle and horses.

The Government thought that possums were heavily affected by the harvests, but protection from hunting was also a response to poor overseas markets and growing public opposition. The Department Annual Report in 1924 stated that the season was closed in 1924 because of the danger of extinction for possums in many districts and an over-supply of possum skins in the overseas markets¹⁹. After the 1936 harvest, no more seasons were opened, partly due to collapse of the markets.

Regulation of the industry

The government official legally in charge of administering *The Native Birds Protection Acts, 1877 to 1884*, and its successors was the Chief Secretary of the Department of Agriculture and Stock. Staff reported to Chief Secretary, who was in charge of the Opossum Boards when they were created, and of the Rangers appointed under the 1921 Act.

Legislative framework

Before 1906, two sets of fauna legislation had been established in Queensland, *The Native Birds Protection Acts, 1877 to 1884*, and *The Game and Fishes Acclimatisation Act of 1898*. They gave protection to a limited number of native birds and introduced game animals. However, there was no protection for native mammals. From 1906-1952, three principal Acts regulated the trade in koala and possum skins: *The Native Animals Protection Act of 1906*; *The Animals and Birds Act of 1921*; and *The Fauna Protection Act of 1937*. The first two sets of legislation were later amended to become *The Native Animals Protection Acts, 1906 to 1910*, and *The Animals and Birds Acts, 1921 to 1924*, respectively. In 1952, a new fauna Act was passed, *The Fauna Conservation Act of 1952*. The Hon. W.V. Brown, a Member of the Legislative Council, made an initial attempt to introduce a private members Bill to protect koalas with a close season²⁰. (From 1910, the legislation refers to the non-harvest period as a "close season", and that terminology is used here.) A *Bill to Protect The Native Bear* was introduced in 1904, but did not pass the Legislative Council as parliament recessed before this could be achieved.

In October 1906 the first Act to protect native mammals in Queensland was brought down, *The Native Animals Protection Act of 1906*. It had two principal aims, to control taking of koalas and possums for the fur trade, and to protect a few other native mammals (s.3, 1906 Act) (Table 2). The "native bear (*Phascolarctos cinereus*) and opossum" were protected by a six month close season from 1 November of one year to 30 April the following year, unless otherwise proclaimed (s.2 1906 Act) (Table 1). The species of "opossum" were not specified and probably included all *Phalangerids* that were hunted for their skins. The 1906 Act also provided for collecting by scientists, protection of crops and orchards from native mammals, and taking of protected animals by "Any aboriginal killing any native animal for his own food". The Act was based closely on the Bill of 1904, with identical wording in many sections.

Table 2. Mammals that were "absolutely protected" under the 1906 Act (s.3).

Tree Kangaroo (all species of <i>Dendrolagus</i>)
Wombat (<i>Phascolomys gillespiei</i> [sic]) [= <i>Lasiorninus krefftii</i>]
Duck Mole or Platypus (<i>Ornithorhynchus anatinus</i>)
Hedgehog or Echidna (<i>Echidna aculeata</i>) [= <i>Tachyglossus aculeatus</i>]
Flying Squirrel or Opossum Mouse (<i>Acrobates pygmaeus</i>)

¹⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J1190 file 14462. 1937. Report on mistletoe as a food source for possums, from H.E. Young to Secretary Sub-Department of Forestry, 11/11/1937.

¹⁷ Department of Agriculture and Stock, Annual Report 1928-1929. Protection of Native Fauna p. 11. Queensland Parliamentary Papers, 1929.

¹⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J1079 file 3760. 1936. Letter to the Minister for Agriculture and Stock from United Graziers' Association of Queensland, 5/3/1936.

¹⁹ Department of Agriculture and Stock. Annual Report 1923-1924. The Animals and Birds Act p. 26. Queensland Parliamentary Papers, 1925.

²⁰ Department of Agriculture and Stock. Annual Report 1905-1906. Native Bears p. 8. Queensland Parliamentary Papers, 1906.

Comments at the time show that there were two motives for the introduction of the 1906 Act, protecting the native bear and the opossum from extinction, and protection of the resource to ensure the viability of the fur industry. These animals had been taken widely for their fur up to that time, and the extinction of the koala was predicted. When *A Bill to Protect The Native Bear* was proposed in 1904, it was thought that koalas would be exterminated in a few years if hunting for furs continued uncontrolled. Prior to the introduction of the 1906 Act, the Annual Report of the Department of Agriculture and Stock states, "but for the harmless native bear (*Phascolarctos cinereus*), which is in no way a pest, there is no protection, notwithstanding that it is threatened with extermination owing to the value of its pelt. ... The ease with which, by the use of poison and the consequent small outlay, to obtain a cash reward is such that these innocuous animals, if not protected by a close season, will soon be exterminated"²⁰. Close seasons were added for possums in the 1906 Act for the same reason. In the debate on the 1906 Act it was stated "the farmer and his sons" had wiped out the opossum in many districts and in Dalby and Warwick they were practically exterminated²¹.

At an official level, the development of the legislation was also guided by a desire to conserve the resource and create a sustainable industry. In the debate on the 1906 Act it was said, "The bear is an animal that produces a valuable fur and a number of people make a livelihood preparing and exporting the skins". A central purpose of the Bill was to protect the fur industry by preventing over-harvesting. The Department of Agriculture and Stock stated that opossum skins tended to increase in value from year to year owing to the necessity for furs in the colder parts of the world, and this emphasised "the importance, to those engaged in the fur industry of this State, of every effort being made for the judicious conservation of our fur resources"¹⁹. This statement was made with reference to indiscriminate taking of furs and depletion of breeding stock. Other statements throughout the period support this view.

The 1906 Act was refined in a 1910 amendment that provided for declaration of reserves to protect the animals listed under the Act. *The Animals and Birds Act of 1921* refined the provisions of the earlier Act, including more detailed provisions in many areas. It also brought all native and introduced fauna under a single Act, replacing the native birds and game and fishes Acts. Provision was also made for establishing Regulations under the Act.

On 25 February 1926, protection for koalas and possums was extended over the entire year under an Order in Council, but with a provision that "Season for Native Bear and Opossum may be opened by Order in Council",

thereby permitting open seasons to be declared for any period of time. This may be viewed as weakening the previous legislation, which at least had a fixed close season from November to April. The 1937 Act finally gave the koala total protection from harvesting, removing the ability to declare an open season (s.8 1937 Act) (the final open season had been held ten years earlier in 1927). However, possum (*Trichosurus* spp) open seasons could still be declared under the 1937 legislation. Finally, under *The Fauna Conservation Act of 1952*, possums were omitted from the schedule of species subject to an open season, indicating that open seasons would no longer be considered and bringing the industry permanently to a close. This action was essentially a formalisation of what was already the practice, as the last possum open season occurred in 1936.

The Acts initially (1906 Act) referred to possums by a common name only, "opossum". In March 1922, possums were defined as "Opossum (all Species) *Phalangerinae*". *Phalangerinae* then included all possums and gliders other than the Honey Possum, indicating that all Queensland species could be harvested. In August 1922, the definition of "opossum" was restricted further by excluding a number of species, leaving only *Trichosurus* spp., the Common Ringtail Possum *Pseudocheirus peregrinus* and the two species of cuscus. The Striped Possum *Dactylopsila trivirgata*, all other species of *Pseudocheirus* (ringtail possums), and all gliders were excluded from the definition. "Flying squirrels", referring to the genera *Petaurus* and *Petauroides*, were listed in the schedule of totally protected fauna in February 1926. Cuscuses were protected from harvest in 1929.

Presumably, most of the harvest comprised the Common Brushtail Possum *T. vulpecula* due to its greater overall abundance and much wider distribution than that of other species, especially in inland regions. However, many ringtail possums *Pseudocheirus* spp. were taken (Table 10). Other correspondence prior to 1922 (when they were protected from harvest) refers to rainforest possums being taken in north Queensland, presumably including *Pseudocheirus* spp. Dalgety & Co. report obtaining skins from the Atherton Scrub in 1919.²² A trapper from Townsville wrote to the Department of Agriculture and Stock in 1920 that ringtail possums from the tops of the scrubs of the coast mountains brought up to £1 per skin in Ingham and were the finest skins in the world²³. At that time the average male wage in the Commonwealth was £4 9s 10d per week and £1 was a considerable sum (Commonwealth of Australia 1921). In 1930 Ranger Holmes reported that "green opossums" (i.e. *Pseudochirops archeri*), were to be found around Kuranda, but not in any great number²⁴.

²¹ Queensland Hansard: Vol. 97 July to November 1906, P. 874. Fourth Session, Fifteenth Parliament, Legislative Assembly, 20/9/1906. Native Animals Protection Bill. Committee Debate.

²² Queensland State Archives: Department of Agriculture and Stock. AGS/J110 file 80. 1920. Letter from Dalgety and Company, 5/1/1920.

²³ Queensland State Archives: Department of Agriculture and Stock. AGS/J110 file 80. 1920. Letter from F. West, 5/8/1920.

²⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J733 file 3604/1666. 1930. Memo from Ranger Holmes, 4/11/1930.

At Bega on the south coast of New South Wales, Common Ringtail Possums *Pseudocheirus peregrinus* were also commonly taken, together with the Sugar Glider *Petaurus breviceps* and Greater Glider *Petauroides volans* (Lunney and Leary 1988). The latter were used for trimmings.

The 1937 Act listed possums under the generic name for brushtail possums, restricting the regulated harvest to "Opossum *Trichosurus*". Use of the generic, but not the specific names in the 1937 Act and earlier legislation implies that the take generally included the Mountain Brushtail Possum *Trichosurus caninus* in areas where it occurred. However, it must have formed a minor part of the total take due to its more restricted distribution and frequent occurrence in less accessible and denser habitats. The best prices for Queensland possum skins were for blue or red skins, whereas the mountain brushtail has a much darker pelt. There is little evidence in the material surveyed that much trapping was carried out in wet sclerophyll forest or rainforest, which is a common habitat for *T. caninus* in Queensland.

The changes in legislation also demonstrate change in the common name from "native bear" to "koala". Gradually, "koala" rather than "native bear" came into use in the legislation and elsewhere, with "native bear" persisting longer in more informal and colloquial usage. In 1929, in an article entitled "The Story of the Great Slaughter", David G. Stead, used both terms but used the term "native bear" more frequently²⁵. In requesting koalas for Magnetic Island in 1931, Mr A. Keller referred to "koalas" instead of "native bears"²⁶. Elsewhere in this correspondence, the term "native bear" continued in use. The 1937 Act refers to "Native bears (koalas)" (s.8, s.14 the Act). The addition of "koala" in brackets indicates that the use of "koala" was becoming more widespread. The 1937 Fauna Authorities Conference also used the term "koala" rather than "native bear"²⁷ (AGS/J 1195 file 18381, item 1442). By 1937, the terms "native bear" and "koala" were interchangeable in the press. In the Fauna Conservation Act of 1952, the koala is referred to as "Koala (commonly known as 'Native Bear')".

Charles Barrett used both "native bear" and "koala" in 1919 in *In Australian Wilds* but in 1943 in *An Australian Animal Book* used the name "koala" only. In *The Native Bear Book, the Blue Gum Family at Australian Koala Park*, in 1932 (Burnet 1932), both terms are used. In 1934, *A Checklist of the Mammals Recorded from Australia* (Iredale and Troughton 1934) used the common name "koala". The term "koala bear" seems to have been a compromise adopted in colloquial use, perhaps used by people uncomfortable with the old name, but not quite able to bring themselves to use the new terminology.

Development of wildlife management practices

The two earlier fauna Acts (*The Native Birds Protection Act of 1877*, and *The Game and Fishes Acclimatisation Act of 1898*) introduced some basic wildlife management practices into Queensland legislation: permanent protection; close and open seasons; declaration of reserves and sanctuaries; declaration of fauna districts (to facilitate regional differences in management regimes); regulation of apparatus used for taking; and the use of dedicated rangers to police the acts. These mechanisms later became the basis of the legislation for the fur industry. These early Acts are longer and more complex, and employ a wider range of wildlife management practices than the 1906 Act, implying that the latter was put together in haste to meet a specific need.

Although *The Native Animals Protection Act of 1906* was very brief, consisting of nine sections and one schedule, it did establish two main management practices for use with native mammals: permanent protection for some species (mainly species of scientific and cultural interest, Table 2) (s.3 1906 Act); and a set six-month close season over summer (November to April) for koalas and possums, with provision for declaring an open season of varying length at other times (s.2 1906 Act). No permits were required to take wildlife.

Close seasons provide a basic method of regulating the size of a harvest. The underlying principles of a close season are: that the wildlife is provided with a safe period in which to breed and increase in population size prior to the next harvest; and/or that important life stages (e.g. young animals or breeding females) may be protected from harvest during the close periods; and/or that the time period regulates the numbers taken – a shorter open period leads to a smaller harvest. None of these principles were fully applicable to the koala and possum harvest as it operated in Queensland at that time. The first, population increase during close seasons probably occurred to some extent, particularly during the longer periods of closure, when any illegal taking probably occurred at low levels. It was unlikely to have full effect when it was anticipated that seasons would open annually, because it was easy for hunters to continue taking animals during close seasons in anticipation of the next open season. This reservation would apply in particular to possums, which were subject to frequent open seasons (Table 1). However, the system was probably effective in limiting the harvest to a level substantially lower than that which would have prevailed in the absence of protection, and to that extent, it can be judged successful as a wildlife management mechanism.

²⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J565 file 29/604. 1929. Report from David Stead. The Story of the Great Slaughter. The death knell of the native bear.

²⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J812 file 11569. 1931-1932. Correspondence concerning release of koalas on Magnetic Island: Letter from G. Lloyd-Apjohn, 1/6/1931. Letter from A.J. Keeler 20/10/1931. Memo from Under-Secretary, 27/10/1931. Memo from W.R. Holmes, 11/11/1931. Memo from Under-Secretary, 13/11/1931. Memo from W.R. Holmes 25/11/1931. Memo from W.R. Holmes, 3/3/1932.

²⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J1195 file 18382. 1937. Minutes of 1937 Fauna Authorities Conference, 14-16/9/1937.

A number of suggestions were made to increase the effectiveness of the Act. Earlier legislation made provision for the declaration of reserves for the protection of native birds (amendment to the Native Birds Protection Act). This concept was adopted in the 1910 amendments to the 1906 Act to allow for the establishment of reserves for koalas and possums. It was hoped that, in these protected areas, koalas and possums would breed and increase in numbers. In this idea can be seen the genesis of some elements of the current Queensland conservation reserve system, and the proclamation of conservation reserves for protection of fauna and flora as well as areas of significant natural beauty. The 1910 amendment also strengthened police and regulatory powers (powers for police to enter premises and to seize evidence), made illegal the possession of cyanide by trappers, and provided for registration of trappers, permits for trappers, and appointment of rangers for reserves.

The Acts of 1921 and 1937 included more detailed provisions for the management of the fur industry. The 1921 Act, with the 1924 amendments, made significant advances in establishing a management framework for the fur trade, although it was really occurring in the final days of the industry - after this Act, there were only seven brief possum seasons and one koala season. Major provisions relating to the fur trade are shown in Table 3.

The effective control over size of the harvest and conservation of the resource now consisted of a close season with enhanced regulatory powers, supported by a number of sanctuaries where harvest was totally prohibited. Given the small total area across the state, sanctuaries would not have had a significant role in conserving koala and possum populations. Regulation of the industry was supported by a range of other mechanisms, listed above, which should have assisted in reducing the size of the take during both close and open seasons. In the later years, rangers and other government

officers made estimates of abundance before determining each open season, but these estimates were subjective and were made by untrained people (Gordon and Hrdina 2005). However, this did provide some information on abundance, which was relied on when deciding whether to open a season.

Management of the koala and possum trade always relied on indirect controls over the size of the harvest - mainly close seasons and reservations. Some key features of modern harvest regimes were never used in the regulation of the industry, including the use of detailed resource monitoring and population size estimation, the establishment of numerical limits to the size of the harvest (i.e. quotas), and use of differing quotas and management regimes regionally. Choquenot (1996) gives an account of the theory underlying modern harvesting regimes. However, the management system was probably effective in limiting the harvest to a level well below that which would otherwise have prevailed.

Although the state was now divided into districts, full use was not made of the districts in developing regional management strategies. Close and open seasons continued to be declared uniformly across the state, despite recommendations to the contrary, such as Department of Agriculture and Stock suggestions for a possum open season in part of central Queensland in 1925²⁸. Seasons could have been opened only in districts where abundance was high, as happened in New South Wales. For example, regional management was applied in New South Wales in a short open season (20 days) for possums in 1926 in two Pastures Protection Districts only, Moree and Narrabri, with a harvest of 11,701 skins²⁹.

In the 1937 Act, the provisions of the 1921 Act were developed and refined, with more detail and complexity. There were two significant changes for the trade in koalas and possums. A permanent close season was established

Table 3. Major provisions relating to the fur trade established in the fauna Acts and Regulations, 1921-1924.

Fur trade provisions	Legislation
A royalty on the sale of skins was introduced in 1924 (five percent of gross sale price). Proceeds of the royalty were dedicated to funding the implementation of the Act	s.8B, 1924 Act, s.18, 1925 Regulations, s.18A, 1924 Act
Proclamation of Districts to facilitate regional management of the industry	s.4, 1921 Act
Establishment of Opossum Boards to administer the Act in each district	s.20, 1924 Act
Development of controls over trappers, trapping procedures and localities	1925 Regulations
Licensing of skin dealers to tighten control over taking and selling skins.	s.20, 1921 Act, s.1, 1922 Regulations
Monitoring the take and controlling sales via dealer returns and skin identification (branding)	1925 Regulations
Development of extensive controls over trade in furs	1925 Regulations
"Reserves" under the earlier legislation became "sanctuaries", with total protection for "any animal or bird"	s.4, 1921 Act
Appointment of Rangers to police the Act	s.5, 1921 Act

²⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 54513. 1925. Memo reporting on abundance of possums and koalas for 1925, 3/2/1925.

²⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J464 file 2455. 1927. Memo: Opossums and Native Bears (report on possible 1927 open season), 21/5/1927.

for “native bears (koalas)” (s.8 1937 Act). This action formalised what had already been the practice since 1927. Secondly, Opossum Districts were placed under the control of an officer appointed by the Government rather than an elected Opossum Board (s.4 Regulations).

Illegal take

Many observers reported that the legislation was ineffective in preventing illegal take, animals being trapped in close seasons in anticipation of a season being opened, and that the practice was very common. Illegal take in the close season was widely reported throughout the entire three decades of the harvest.

In 1907, the Leichhardt East Marsupial Board, in suggesting a close season for koalas, observed that the present close season was not strictly adhered to, as it was only a matter of accumulating the skins and marketing them early in the next open season³⁰. In 1922, Mr C. Wallbank told the Minister for Agriculture and Stock that trappers take possums outside the season and store the skins in caves.³¹ Mr Hooper, Land Commissioner Roma, reported that “certain persons trap the animals [possums] throughout the year ... One individual disposed of some 90 dozen skins during the first few days of last year’s open season”³².

Thomas Foley M.L.A. wrote to Mr Forgan Smith, Minister for Agriculture in January 1926, recommending the opening of a possum and bear season, “I would further add that large quantities of bear skins are already stacked on hand in many Districts in Queensland, and will find their way through illegal channels, causing loss of revenue to the Animals and Birds Fund, if the season is not opened”³³. In May 1927, Ranger Williams, Rockhampton, reported finding skinned bear carcasses at several places in his district three months before the open season³⁴. Marshall Goody at Monto admitted to taking 68 dozen possum skins before the 1926 possum season opened and hiding them in a 100 gallon water tank in the scrub (Johnston 1982). Another former trapper, Jim Goody, has given a detailed account of some of the practices used by trappers, including taking koalas out of season, preserving and burying the skins for concealment, and illegal shooting

with spot lights (Berry 1984). Rolfe (2001) reports illegal take during close seasons in the Springsure district. The vast area of the state, the paucity of Rangers and the mobile habits of trappers all contributed to making the Acts difficult to police.

The provision in the Act allowing Aboriginal people to kill any native animal for food also provided a means for persons wishing to trap outside the open season to evade the Act. In central Queensland, opossum shooters employed a few Aborigines who ostensibly killed the animals for food but in reality sold the skins or handed them over to an employer for other rations, or opium, which was still a means of barter with Aborigines at the time³⁵.

Illegal taking was also alleged in connection with exports. For example, the Chief Secretary’s Department in New South Wales reported to Queensland in 1934 that 5,444 koala skins (labelled as “wombats”) were on offer at the London sales³⁶. They pointed out that as koalas were totally protected and very scarce in New South Wales, it was very possible the skins came from Queensland. The Department of Agriculture and Stock sought information with regard to this from Rangers and a Stock Inspector who replied that they considered the skins had not been taken from Queensland, although reports of illegal taking of skins were known. However, further inquiries in New South Wales indicated that the skins were the balance left over from original consignments from Queensland when the last open season was declared in 1927. It was assumed that the skins were unsaleable in 1927 and were offered again in 1934 owing to a shortage of skins³⁷.

By 1936, other states were also putting pressure on Queensland over the branding of skin bales as a cover for exporting illegally obtained skins, as Queensland regulations permitted the royalty brand to be placed on the bale (rather than on each separate skin) if the skins were to be exported beyond the State (s.18, 1925 Regulations). The 1937 Fauna Authorities Conference³⁸ was concerned sufficiently to recommend that the British authorities be asked to prohibit the importation of skins except under licence.

³⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A file 11070. 1907. Letter from Leichhardt East Marsupial Board re: Protection of native bears, 8/7/1907.

³¹ Queensland State Archives: Department of Agriculture and Stock. 1922: AGS/J150 file 379. Notes on a deputation to the Minister for Agriculture, 21/4/1922. 1924: AGS/J262 file 2003D. Memo from Mr Gillies re meeting with Mr Mattingley, 31/1/1924.

³² Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Summary of reports on open season, 26/3/1923.

³³ Queensland State Archives: Department of Agriculture and Stock. AGS/J370 file 813. 1926. Letter from T. Foley re: stock-piling of bear skins, 5/2/1926.

³⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J464 file 2453. 1927. Memo from Ranger Williams, Rockhampton re: taking of bears out of season, 2/5/1927.

³⁵ Department of Agriculture and Stock. Annual Report 1908-1909. Native Animals Protection Act p. 35-36.

³⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J928 file 1928. 1934. Letter from Chief Secretary’s Department, NSW, to Under Secretary Department of Agriculture and Stock, re: wombat skins reported in Fur Record, 3/7/1934.

³⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J956 file 17303. 1934. Memo from Department Agriculture and Stock, concerning sale of bear skins in England, 2/8/1934.

³⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J1195 file 18382. 1937. Minutes of 1937 Fauna Authorities Conference, 14-16/9/1937.

Other management procedures

The 1925 Regulations controlling the industry became much more complex than in the earlier Acts, and from 1926 were supported by dedicated rangers to police the regulations. Compulsory identification of skins with brands aided in the collection of royalties (ss.17, 18, 1925 Regulations). It also helped to control illegal movement of skins between states, which was recognised as a problem in administering the harvest. Other states permitted possum trapping, and timing of seasons could differ between states. New South Wales had an open season in 1930 in which 800,000 possums were taken in a two month period (Hutton and Connors 1999) and in 1935 Victoria had a possum open season. Queensland was closed during these years.

From 1925, permits were issued for specific properties, the total number of permits issued for each property was restricted and trappers had right of access to those properties (ss.9, 11, 1925 Regulations). Properties could reserve up to one sixth of their holding from trapping for a specific purpose. The rights of landowners now included denial of access to some paddocks, denial of camping within 200 yards of a watering point and power to demand that trappers show their permits. In addition, trappers were required to extinguish campfires and remove snares. Animals that might cause problems with stock, that is, stallions and rigs (a male horse with undescended testicles), were also prohibited. Under the 1937 Act, this prohibition was extended to cattle dogs and sheep dogs.

The royalties and other money received under the Act were placed in a trust fund for the propagation and protection of native fauna (s.18A 1924 Act) and in 1927 amounted to £18,897 12s 9d. This fund was abolished under the 1937 Act.

The keeping of koalas or possums in confinement, other than at a registered zoo, required ministerial approval (s.15, 1921 Act).

Cyanide

The use of potassium cyanide for taking possums was prohibited under the 1906 Act. This prohibition was continued under the 1921 Act (s.16) and 1937 Act (s.22), apparently with little success, as reports indicated that it continued to be widely used. The use of cyanide was widespread and difficult to police and it continued in use over the whole period. It was difficult to obtain evidence

of cyanide use and prosecutions were few. Cyanide was opposed because it caused deaths of stock and indiscriminate deaths of possums. Considerable numbers of cattle deaths were attributed to cyanide poisoning, leading to strong protests from property owners. In 1910, the Stock Inspector at Roma reported the death of about 30 cattle on Mt Beagle, stating, "during Show time while the owners were absent in Roma, a class of possums, termed sneakers, had laid cyanide baits over the affected area and the cattle were found dead near the clumps of pine just where possums are said to lay the baits in larger quantities than anywhere else"³⁹. Complaints were also made of trappers killing many possums indiscriminately through failing to take up baits after each session of poisoning. Poisoning of possums that were not collected and skinned was seen as a waste of the resource, and also as a threat to the species due to excessive mortality. A deputation of skin dealers made very strong complaints to the Minister about the use of cyanide on these grounds in 1906⁴⁰. Use of cyanide caused ongoing controversy during the harvests.

Complaints from graziers of loss of stock to cyanide⁴¹ were a major reason for the amendment of the Native Animals Protection Act in 1910, making possession of cyanide illegal and giving police powers to enter and search premises and seize any cyanide. Annual Reports of the Department of Agriculture and Stock also acknowledged the problem of illegal use of cyanide and the detrimental effect on stock⁴².

Spotlighting

The 1922 Regulations banned the use of "electric and other artificial torches" (that is, spotlights), while trapping. However, the difficulties of policing the regulations over large areas meant the practice was still widely used. Pastoralists objected to flares and lights "on the ground that the exposure of a flare of sudden light is very liable to cause stampeding and injury to cattle quietly camping"⁴³ or might result in trappers starting fires. The United Graziers' Association of Queensland wrote in 1923 that the "use of flashlights disturb bullocks very considerably and thereby cause them to lose so much condition that they cannot be marketed in that particular season"⁴⁴. The ban was also intended as an additional means of limiting the size of the harvest. Hunting with lights was thought to cause "unnecessary slaughter of opossums and native bears" as it made it much easier to find and shoot nocturnal animals

³⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A. 1910. Memo about Deaths of cattle from illegal use of cyanide, 16/11/1910.

⁴⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/N350. 1906. Deputation from Brisbane Stock and Produce Agents Association, 8/9/1906.

⁴¹ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A. (1) 1909. Memos about Use of cyanide in the destruction of marsupials, 26/11/1909. (2) 1910. Memo about Deaths of cattle from illegal use of cyanide, 16/11/1910.

⁴² Department of Agriculture and Stock. (1) Annual Report 1916-1917. Native Animals Protection Act p. 24. Queensland Parliamentary Papers, 1917. (2) Annual Report 1918-1919. Native Animals Protection Act p. 22-23. Queensland Parliamentary Papers, 1919.

⁴³ Department of Agriculture and Stock. Annual Report 1921-1922. The Animals and Birds Act of 1921 p. 18-19. Queensland Parliamentary Papers, 1922.

⁴⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/201 file 2003. 1923. Letter from United Graziers' Association to Minister for Agriculture and Stock about use of flashlights, 24/1/1923.

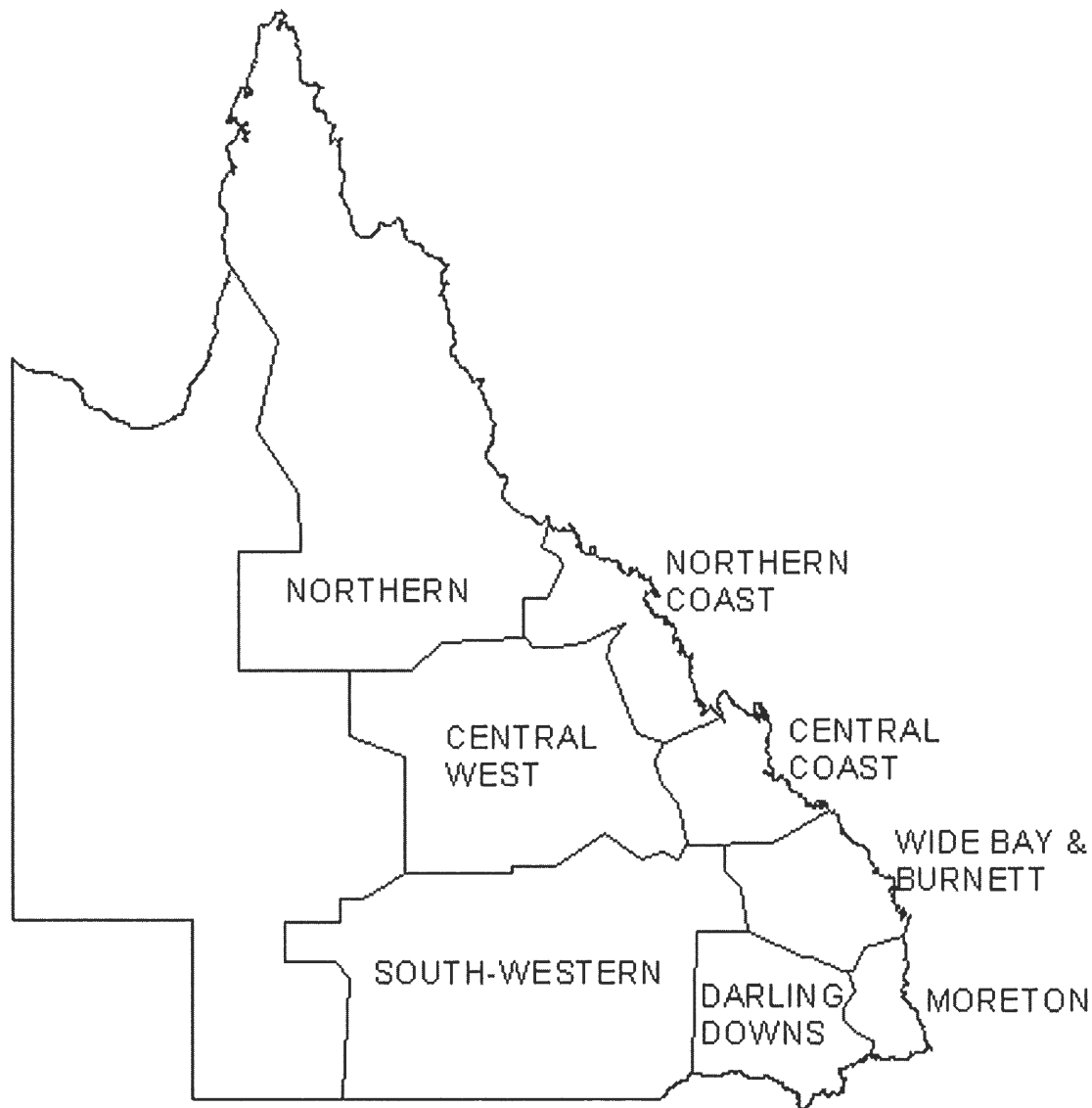


Figure 3. Map of Opossum Districts. Boundaries are approximate.

and was thought to lead to over-harvesting and was “responsible for the almost total extinction of the opossum in many districts”⁴³. As with cyanide, use of spotlights was thought to threaten the survival of populations through over-harvesting, and caused ongoing controversy.

Opossum Boards and Rangers

In February 1926, the Government created eight Opossum Districts (Figure 3), controlled by Opossum Boards. The Districts each consisted of a number of Petty Sessions Districts (Table 4). The purpose of the Opossum Boards was to administer the possum and koala harvest. The Boards provided a more specialised mechanism for permitting, as Board members had a better knowledge of the issues and provided strong stakeholder and regional input into the process. Previously, Clerks of Petty Sessions issued permits.

Opossum Boards comprised two elected members and a chairman. Boards were elected much like the Marsupial

Destruction Boards (Hrdina 1997). The members included a government appointee, a land owner’s representative, and a trapper’s representative. The government appointee was often the Ranger for the district and also served as chairman. The latter two positions were elected by land owners and trappers respectively. Thus, private interests, not government interests, dominated Boards. Land owners and trappers, however, had differing interests in the harvest and did not necessarily work together. Boards functioned during open seasons. They issued trapping permits, regulated the number of trappers operating in the District, issued licences to dealers, collected licence fees, and collected royalties (five per cent of gross sales) on possum and koala skins. Boards also provided feedback to the State on the harvest, with suggestions for improvements to regulations⁴⁵. Under the 1937 Act (s.5), Opossum Districts were retained, but the Boards were replaced by an officer in charge of each District, implying that the government was dissatisfied with the Board system. For example, in 1926, Mr Holmes, Chairman

⁴⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/436 file 15150. 1926. Memo from Ranger W.R. Holmes re: regulation of open seasons, 14/9/1926.

Table 4. Opossum Districts, with location of headquarters and the Petty Sessions Districts of which they were composed.

District	Headquarters	Petty Sessions Districts
Central Coast	Rockhampton	Banana, Gladstone, Mt. Morgan and Rockhampton
Central West	Emerald	Alpha, Aramac, Barcaldine, Blackall, Clermont, Emerald, Muttaborra, Springsure and Tambo
Darling Downs	Toowoomba	Allora, Clifton, Condamine, Cooyar, Crow's Nest, Dalby, Goombungee, Goondiwindi, Highfields, Inglewood, Jondaryan, Killarney, Oakey, Pittsworth, Stanthorpe, Texas, Toowoomba and Warwick
Moreton	Brisbane	Beaudesert, Brisbane, Caboolture, Cleveland, Dugandan, Esk, Gatton, Goodna, Harrisville Helidon, Ipswich, Kilcoy, Laidley, Logan, Lowood, Marburg, Maroochy, Nerang, Redcliffe, Rosewood, Southport, Woodford and Wynnum.
Northern	Townsville	Atherton, Cairns, Cape River, Cardwell, Charters Towers, Chillagoe, Coen, Cook, Douglas, Etheridge, Herberton, Hughenden, Ingham, Mourilyan, Palmer, Ravenswood, Richmond, Somerset and Townsville.
Northern Coast	Mackay	Ayr, Bowen, Collinsville, Mackay, Proserpine and St. Lawrence
South-Western	Roma	Adavale, Augathella, Bollon, Charleville, Cunnamulla, Eulo, Hungerford, Mitchell, Quilpie, Roma, St. George, Surat, Taroom and Yuleba [=Yuleba]
Wide Bay and Burnett	Maryborough	Biggenden, Bundaberg, Childers, Eidsvold, Gayndah, Gin Gin, Gympie, Kilkivan, Maryborough, Mount. Perry, Nanango, Tiaro and Wienholt

of the Northern District Opossum Board, wrote that, "Board meetings are expensive, and so far as this district is concerned could very well have been done without. The government representative takes all the responsibility and does the work. In my case here, I could not see where the Board served any good purpose and the expense is too great"⁴⁵.

In 1926, the Government employed five Rangers to assist in enforcement of the Act. Rangers were "appointed to exercise supervision over sanctuaries, to prevent breaches of the Act in relation to the destruction or captivity of protected native animals and birds, and to report on the increase or decrease in the numbers of native animals and birds as the case may be"⁴⁶. The Rangers had districts, which they patrolled regularly. During the trapping season, they inspected trappers' camps and checked for the use of illegal substances, such as cyanide, which was illegal under the Act. As well as regulation of trapping, their duties included protection of birds, administration of duck and quail seasons and administration of the Native Plants Protection Act. In 1928, there were five full-time Rangers. By 1936, the number of Rangers had been reduced to four, and they were based in areas where there were large numbers of possum trappers or skin dealers. Rangers were supplemented by Honorary Rangers (298 Honorary Rangers in 1928). Honorary Rangers were usually appointed at the same time as a sanctuary was created to help protect the fauna in that sanctuary.

Monitoring

To assist in managing the skin harvest, the Department of Agriculture and Stock carried out a simple form of population monitoring which was used when making decisions on opening the season each year. Harvest totals from previous seasons were also used as supplementary information. Commencing in 1922, the Department of Agriculture and Stock regularly sought the views of government officials on koala and possum abundance in

their districts. This was also done in some earlier years, but apparently less systematically.

Initially, stock inspectors, Crown land rangers, and police were asked questions along the following lines: are Opossums sufficiently plentiful for an open season? were there many trappers during the last season in your district? are Native Bears sufficiently plentiful for an open season? has disease been noticed among native bears? If so, the extent of the disease and to what is it attributed?

Rangers appointed under the Animals and Birds Act officially had a monitoring function "to report on the increase or decrease in the numbers of native animals and birds as the case may be"⁴⁶ and following the appointment of Rangers in 1926, the questions about abundance were directed to the Rangers and the Opossum Boards. By 1929, Rangers were asked to classify abundance into four categories, Plentiful, Fairly plentiful, Scarce, None. In the early 1930s, the questions included a query on economic return to the trapper for effort.

In most years, more reports were in favour of opening the season for possums than for koalas (Table 5). Seasons were opened for possums in 1922 and 1923 in spite of majority recommendations against open seasons. Otherwise, possum open seasons tend to correlate with monitoring recommendations (Tables 1, 5). It is of note that the controversial 1927 koala open season was supported by a high proportion, 50%, of the reports. The koala close seasons in the early to mid 1920s were also supported by the recommendations. The results of the monitoring were used regularly by the government during the 1920s to justify decisions on open seasons.

In the early 1920s, official opposition to open seasons was high, as abundance was thought to be low, but this had weakened by the late 1920s when there was stronger support for open seasons (Table 5). The increase in support for open seasons from the early to late 1920s (Table 5) correlates

⁴⁶ Department of Agriculture and Stock Annual Report 1926-1927. Administration of the Animals and Birds Acts p. 15. *Queensland Parliamentary Papers*, 1927.

Table 5. Percentage of reports recommending an open season for possums and koalas each year, shown by Opossum District and for State. The "Season open" column indicates years when the season was opened. "n" = number of reports. Districts: CC = Central Coast, CW = Central West, DD = Darling Downs, M = Moreton, N = Northern, NC = Northern Coast, SW = South-Western, WB = Wide Bay and Burnett.

Year	CC % (n)	CW % (n)	DD % (n)	M % (n)	N % (n)	NC % (n)	SW % (n)	WB % (n)	State % (n)	Season open
Possum										
1922									20 (10)	Y
1923	29 (28)	13 (24)	4 (25)	13 (8)	19 (64)	48 (21)	6 (33)	13 (15)	18 (219)	Y
1924	19 (32)	18 (28)	8 (26)	18 (17)	24 (59)	56 (16)	18 (38)	13 (23)	21 (239)	N
1925	33 (21)	26 (23)	4 (57)	6 (50)	15 (65)	57 (21)	13 (40)	6 (35)	15 (312)	N
1926										Y
1927	50 (2)	100 (1)		50 (2)		0 (2)	0 (1)	100 (2)	50 (10)	Y
1929	100 (1)	100 (1)			50 (2)	100 (2)	67 (3)	0 (1)	70 (10)	Y
1930	100 (2)	100 (2)		0 (1)	50 (2)	100 (1)	0 (1)		67 (9)	N
Koala										
1922									10 (10)	N
1923	14 (28)	25 (24)	4 (25)	0 (8)	0 (64)	14 (21)	0 (33)	7 (15)	7 (220)	N
1924	34 (32)	36 (28)	0 (26)	0 (16)	0 (59)	25 (16)	11 (38)	9 (22)	13 (236)	N
1925	38 (21)	52 (23)	0 (57)	0 (50)	0 (65)	29 (21)	0 (40)	3 (35)	9 (312)	N
1926	50 (2)	33 (3)			0 (1)		0 (1)	0 (1)	25 (8)	N
1927	100 (2)	100 (1)		50 (2)		0 (2)	0 (1)	50 (2)	50 (10)	Y
1929	100 (1)	100 (1)			0 (2)	100 (2)	0 (3)	0 (1)	40 (10)	N
1930	100 (2)	100 (2)		0 (1)	0 (2)	100 (1)	0 (1)		56 (9)	N

with a change in source of reports. From 1926, reports came mainly from Opossum Boards and Rangers. These sources might be expected to take a different view of the harvest and to have higher skills at estimating abundance.

The recommendations in each district for open seasons mostly correlated with differences in abundance per district (Gordon and Hrdina, 2005). Support for koala seasons was very low in southern and northern Queensland and higher in central Queensland (Central Coast and Central West) (Table 5). District support for possum seasons showed marked differences from that for koala seasons - for example, there was relatively high support for possum seasons in northern Queensland (Table 5). Support for koala and possum seasons was very low in Darling Downs District. Support for koala seasons was also consistently low in Moreton, Northern and South-western Districts.

The marked regional variation in abundance meant that seasons were opened at times when some regions had very low abundance and possibly little capacity to support a sustainable harvest. The monitoring system used during the harvest period suffered from two major shortcomings, observers were untrained and there was never any attempt to estimate population size in any detail. The system was based on the opinions of people who chanced to be on the spot at the time. Nevertheless, as far as can be judged, population trends were identified more or less correctly and timing of seasons did bear some relation to the ability of the overall state population to support a harvest.

During the harvest period, monitoring methods evolved from complete absence of monitoring to a system based on seeking opinions from public servants, then to a system based on seeking opinions from specialist Rangers. By the end of the period, Rangers were asked to classify abundance into four specific categories (see above) rather than just two categories (Sufficient or Not sufficient).

Open seasons

Open seasons for koalas were infrequent, with 6 open seasons in 21 years (1907-1927 inclusive), amounting in total to 1 year 9 months and 11 days from 1906-1927 (Table 1). Possum harvests occurred much more frequently than koala harvests, and possum populations were subject to fairly regular hunting pressure. Close seasons occurred in 1912-14, 1921, 1924-25, 1928, 1930, and 1932-35 (Table 1). The duration of open seasons amounted in total to 6 years and 18 days, with 19 open seasons in 31 years from 1906-1936. The length of close periods when animals were at least partly protected from the harvest were usually lengthy for koalas (mean 38 months, range 6-94 months), but were much shorter for possums (mean 16 months, range 4-58 months) (Table 1).

Breeding season

One of the reasons for implementing close seasons was to protect koalas and possums during the breeding season so that survival of young would not be affected by the harvest⁴⁷. However, initially there was uncertainty over the timing of

⁴⁷ Queensland Hansard: Vol. 93. July to November 1904. page 1024 - 1025 First Session, Fifteenth Parliament. Legislative Council, 30 November 1904. Native Bear Protection Bill, Second Reading Debate.

breeding and the impact of harvesting on the young⁴⁸. The industry was modelled on the north American fur harvest, yet in many of those species the young are born, weaned and able to care for themselves within six months, not within 6 to 12 months as in Australia.

Koala births occur over a broad period in spring-summer. Pouch life lasts about seven months and the young wean at about one year of age. In winter when the open seasons were declared, most females would have dependent young, and indeed, were likely to have dependent young through most of the year. While the common brushtail possum may breed throughout the year, there is a major breeding peak in autumn and a minor peak in spring. Young spend about four to five months in the pouch and wean one to two months later (How and Kerle 1995). Again, during the winter open season, most females would have dependent young. Winter open seasons therefore took a heavy toll of juveniles and breeding females of both species, and neither young nor mothers were protected from the harvest during the breeding season. As the fur was best when animals were in winter coats, there was an inherent conflict between harvesting and the desire to preserve breeding stock and dependent young. Females of both koalas and possums are often carrying young at the time when their fur is most valuable.

In 1906, before the passage of the *Native Animals Protection Act of 1906*, a deputation from the Brisbane Stock and Produce Agents Association met the Secretary (that is, the Minister) for Agriculture and Stock to argue for a winter open season. The Secretary reported that Mr Tryon, the Government Entomologist, had said nothing was definitely known concerning the timing of the breeding season for koalas⁴⁹. The skin dealers favoured a winter trapping season for koalas, as winter skins were of better quality and attracted a higher price. The report on this deputation indicates that the Secretary agreed to a winter open season in support of the fur industry, in the context of an absence of accurate information on the timing of the breeding season. Subsequently, officials became aware that winter open seasons took a high toll of young and the conflict between protecting young and obtaining high quality furs was recognised at an official level. The Annual Report of the Department of Agriculture and Stock 1911-12 stated "at the beginning of the season, half the opossums killed are females carrying young in their pouches, but generally it is conceded that the open season as now constituted is the best for fur"⁵⁰.

Because of the impact on young, the opening of seasons in winter was a contentious issue throughout the harvest period, and many people advocated summer harvests. Mr Buhot, Stock Inspector Clermont, recommended an April-May open season in 1925 for both bears and possums to prevent loss of young⁵¹. Experienced trappers often suggested different dates for open seasons as they found the females they trapped all carried pouch young, e.g. open season for opossums from 1 March to 31 August, suggested by trapper J. Guilfoyle⁵². Others suggested having alternate seasons in each District to allow populations to recover, or having seasons in alternate years, and Henry Tryon suggested establishing large game reservations as in South Africa⁵³. Later, the establishment of sanctuaries came to be seen as a measure that would mitigate the undesirable effects of winter open seasons by providing areas where breeding stock was protected.

In 1919, the koala and possum seasons opened and closed one month earlier than usual (April-September instead of May-October). *The Brisbane Courier* reported, "The Department of Agriculture and Stock wishes to endeavour to protect these young marsupials from destruction. It has been found that numbers of young marsupial skins were coming on the market towards the close of the season, and it is thought that by closing down in September instead of October young animals will be more adequately protected"⁵⁴.

The length of open seasons was determined or recommended by the Department, usually in a memorandum to the minister when the opening of a season was under consideration. Although the earlier Acts allowed for open seasons of up to six months, in practice seasons were often of much shorter length and, over the years, open seasons tended to become shorter (Table 1). However, close seasons, especially in the case of koalas, were not long enough to protect young from harvest mortality.

Markets

Dealers initially considered that the maintenance of markets was the prime consideration and made representations for regular annual seasons so that there would be a regular supply of skins to maintain the interest of overseas buyers. They were sensitive to overseas market demand and did not wish to lose market share due to shortage of skins or irregular supply, and often expressed this view to the government. A regular supply, for example,

⁴⁸ (1) Queensland State Archives: Department of Agriculture and Stock. AGS/N350A. 1909. Memo "Native Animals Protection Bill, Breeding season for opossum and bears, Total protection for native bears, Use of cyanide" (undated). (2) AGS/N350A file 08861. 1908. Memo from Stock Inspector McCarthy, 9/6/1908. (3) AGS/N350. 1906. Deputation from Brisbane Stock and Produce Agents Association, 8/9/1906.

⁴⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/N350. 1906. Deputation from Brisbane Stock and Produce Agents Association, 8/9/1906.

⁵⁰ Department of Agriculture and Stock, Annual Report 1911-1912. Native Animals Protection Act pp. 27 - 28. Queensland Parliamentary Papers 1912.

⁵¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 545. 1925. Memo from Stock Inspector Buhot, 28/1/1925.

⁵² Queensland State Archives: Department of Agriculture and Stock. AGS/N350A file 08861. 1908. Memo from Stock Inspector McCarthy, 9/6/1908.

⁵³ Queensland State Archives: Department of Agriculture and Stock. AGS/J104 file 1826. 1919. Memo from Henry Tryon, Entomologist, 5/6/1919.

⁵⁴ The Brisbane Courier, 8/3/1919.

an annual supply, was necessary to maintain the interest of buyers. They also warned of the possible loss of markets for possum skins to competing New Zealand exporters if the supply was intermittent⁵⁵.

By the 1920s, dealers came to acknowledge the problem of over-harvesting and were keen to see the koala conserved and felt that the decision to open a season was not only a matter of the current state of the markets. Koala and possum skins formed a large part of their overseas trade and they favoured protection of the resource to ensure a reliable supply of skins. They tended, therefore, to advocate two, not necessarily compatible, positions. Firstly, that seasons should be brought into phase with demand (that is, prices), with close seasons when prices were low and open seasons when prices were high; and secondly that seasons should be closed whenever necessary to prevent over-harvesting to ensure that the industry was sustainable.

Another reason for having a close season was to avoid flooding the market with a glut of skins and lowering prices. The poor state of the overseas markets was one reason given against the opening of a possum season in 1924⁵⁶. In 1923, an exporter opposed an open season for possums that year, partly due to the low state of the markets overseas and also to conserve populations to ensure future supplies⁵⁷. He stated that general opinion in the buying trade was against the opening of the opossum season in 1923. In the same year, L.A. Scandrett, a fur exporter, opposed opening the possum season and stated that over 800,000 skins from 1922 were still held in England and America. He also felt the price would not exceed 3s. [3 shillings] per skin which would mean a loss to trappers where, with a delay of a year, the price would rise to 6s. or 7s. [6 or 7 shillings] per skin⁵⁸. The 1931 possum season was also marked by a slowing of the London market. In April 1933, there were 460,000 unsold possum skins on the London market⁵⁹. In order to keep the industry viable, it was felt necessary to keep the season closed for several years or until the number of unsold skins was greatly reduced.

Other influences on open seasons

The koala season was closed for six years from 1909-1914 due to official concern over the level of slaughter⁶⁰. Similar concern was part of the reason for closing the season again for six years after 1919⁶⁰. Before 1919, the

season for koalas had been opened four times without any public controversy, although there was minor opposition to it. Following the koala season in 1919, when there was a major public protest, the government promised not to open the koala season in 1920⁶⁰. After 1919, trappers made pleas to open the koala season regularly, and these pleas were a reaction to that promise from those who saw profit in koala skins and felt that koala numbers were not diminishing. As a justification for opening the season, trappers cited factors such as the failure of other rural industries, unemployment, high abundance of koalas or possums, and occurrence of heavy natural mortality of koalas (and hence the need to "save" the skins that would be lost). H. J. Close of Rolleston wrote to the Minister in 1921, asking for the season to be opened and stating: "I know too well that these facts [i.e. koala deaths due to disease] would be a big lever for the closing of Bears indefinitely if we had a Tory Minister but I feel sure he will see the force of saving pounds to the country which must be naturally lost if the bear season is not opened. Every one is hoping that the Bears and Opossums will open. Selector looking to them to pay their rents & put them on their feet again after the slump in cattle. What the worker will do if they don't open I don't know. I have had nearly 3 weeks work in 5 months while numbers of others were less fortunate. Local storekeepers [sic] are sticking to the worker a bit in the hope of the opossums opening"⁶¹.

The need to "save" skins that would otherwise be lost to natural mortality was commonly given as a reason for opening a season. It was often stated that koalas were dying from worms, or drought or overpopulation, and the skins were going to waste. In 1923, R.H. Triffitt, from Barwon Park Station near Blackwater, stated that countless thousands of bears had died during the summer months of 1922 due to disease resulting from over-abundance, and he had seen 10-15 dead in one day⁶². Mr Buhot, Stock Inspector Clermont, reported in January 1924 "Severe drought conditions causing considerable losses native bears chiefly this month. ... However if the season was opened many skins may be saved"⁶³. He again recommended a November-December season in 1925 "to save the skins that are lost by deaths" each summer due to drought and heat⁶¹. Disease was also given as a reason for opening seasons to "save the skins". Mr Callow from Mitchell wrote to a Member of Parliament in 1920: "Also to ask if there would be any hope of getting the Bears opened, which I may tell you are dying out fast,

⁵⁵ Department of Agriculture and Stock. Annual Report 1907-1908. Native Animals Protection Act p. 35-36. Queensland Parliamentary Papers 1908 Vol. III pp 39-40.

⁵⁶ Department of Agriculture and Stock. Annual Report 1923-1924. The Animals and Birds Act p. 26. Queensland Parliamentary Papers, 1925.

⁵⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 23/2003. 1923. Letter from Harvey Woodcraft, 31/1/1923.

⁵⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 23/2003. 1923. Letter from L.A. Scandrett, 19/4/1923.

⁵⁹ The Courier-Mail, 28/4/1933.

⁶⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/J110 file 80. (1) 1920. Letter from Minister to G.P. Barber, 17/1/1920. (2) 1920. Letters from Secretary for Agriculture and Stock to F.M. Forde 23/2/1920, to W. Dunstan, 25/2/1920.

⁶¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J150. 1921. Letter from H.J. Close to T.A. Foley, 26/2/1921.

⁶² Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Letter from R.H. Triffitt of Barwon Park Station, 30/1/1923.

⁶³ Queensland State Archives: Department of Agriculture and Stock. AGS/J262 file 2003. 1924. Memo from Stock Inspector Buhot, 30/1/1924.

And yet the law forbids us from making use of the skins"⁶⁴. Mr Black, Ranger at Mackay, complained in June 1927 that false reports of hundreds of bears dying were being used to induce the department to declare an open season⁶⁵. This complaint of falsity is given credence by the timing, that is, in winter – other reports indicate that mass deaths occurred in summer in hot, dry weather (Gordon and Hrdina 2005).

Harvest figures from previous seasons strongly influenced decisions on seasons. Apparent over-harvesting in earlier years was commonly quoted by officials when justifying close seasons. The possum season was closed in 1924 due to reported low abundance throughout the state following a high take in 1922 and 1923, and belief that a close season in 1924 would allow the overhang of skins on the markets to clear and result in a higher price later⁶⁶.

No possum season was opened from 1932-1935, although there was recurring agitation for a season. The Government decided not to open a season in 1933 because of two factors, official reports indicating that the opossum was scarce, and the depressed state of the skin market⁶⁷. Surveys found possums to be scarce to exceedingly scarce in 28 districts, and plentiful in only six districts. On the English market there were stocks of 460,000 unsold possum skins⁶⁸. Eventually, a season was opened in 1936, partly as an unemployment or seasonal employment measure. Graziers were opposed to the 1936 season and suggested that the government needed to choose between the meat and possum fur industry⁶⁹. In settled areas, where possums were pests of crops, especially of fruit and sugar, growers often favoured an open season, although most of the trappers worked away from settled areas in more heavily timbered country where possums were more abundant. In 1937, the Department of Agriculture and Stock recommended against opening the possum season because of poor markets overseas and depleted stocks of possums. Surveys had found that possums were fairly plentiful in Central Western and Central Districts, but scarce in southern Queensland⁷⁰.

Interstate politics, as well as local politics, also played a role. Other states, especially New South Wales, and to some extent Victoria, where koala populations had been much reduced, increasingly put pressure on Queensland to cease trapping koalas. In New South Wales, in particular, it was felt that koala trapping in Queensland served to cover illegal hunting for skins in that State.

Conservation of the resource – Sanctuaries and restocking (translocation)

During the harvest period, the Government developed conservation policies, including restocking areas where animals were thought to be shot out, and establishing sanctuaries.

Sanctuaries

The 1906-1910 Acts provided for establishing reserves for the protection of animals listed under the Acts. The reserves established under *The Native Birds Protection Acts, 1877 to 1884* and *The Game and Fishes Acclimatisation Act of 1898* were adopted under the 1921 Act (ss.2, 4) and became known as sanctuaries.

Sanctuaries were proclaimed in an effort to protect populations of possums and koalas. Many properties, as well as Crown forestry land, were declared sanctuaries on which no shooting or trapping was allowed. Since the winter open seasons caused heavy mortality of breeding females and their young, it was thought that sanctuaries would provide areas where possums and koalas could breed unmolested and increase and restock surrounding areas. The establishment of sanctuaries was seen, at least initially, as an alternative to the use of extended close seasons for promoting population increase⁶⁸. If sanctuaries were established, it was felt that it would be possible to still have regular open seasons and the associated economic benefits, yet avoid exterminating the stock. Sanctuaries were also useful to property owners as they could legally refuse any trapping or shooting on their properties, thus protecting their stock and other interests.

In 1919, eight reserves had been proclaimed⁶⁹. A major effort to establish sanctuaries was made during the 1920s. By 1928, there were about 160 mainland sanctuaries, totalling about 728,400 ha or about 0.4% of the state, including Crown land and private properties⁷⁰. Sanctuaries appear to have ranged in size from a few hectares to perhaps a few thousand hectares. Koalas and possums were also protected on some other Crown land, mainly forestry land. In 1936 there were 322 timber reserves comprising 1,350,005 ha, about 1.9 percent of the state⁷¹. The total area was insufficient to make a significant contribution to maintaining the status and abundance of koala and possum populations during harvests on a state-wide basis, although it may have had a local impact.

⁶⁴ Queensland State Archives: Department of Agriculture and Stock AGS/J110. 1920. Letter from J.W. Callow to J.A. Spencer MLA, 24/5/1920.

⁶⁵ Queensland State Archives: Department of Agriculture and Stock AGS/J463 file 2455. 1927. Memo from Ranger Black, 20/6/1927.

⁶⁶ Queensland State Archives: Department of Agriculture and Stock AGS/J1079 file 3760. 1936. Letter to the Minister for Agriculture and Stock from United Graziers' Association of Queensland, 5/3/1936.

⁶⁷ Queensland State Archives: Department of Agriculture and Stock AGS/J1182 file 10426. 1937. Memorandum to the Minister for Agriculture and Stock re: opossum skin sales in London, 28/4/1937.

⁶⁸ Department of Agriculture and Stock, Annual Report 1911-1912. Native Animals Protection Act pp. 27 - 28. Queensland Parliamentary Papers 1912.

⁶⁹ Queensland State Archives: Department of Agriculture and Stock AGS/J104 file 1826. 1919. Memo from Henry Tryon, Entomologist, 5/6/1919.

⁷⁰ Queensland State Archives: Department of Agriculture and Stock AGS/J546 file 27/16835. 1928. Letter from Under Secretary to Chief Secretary's Department, N.S.W., 11/10/1928.

⁷¹ Queensland State Archives: Department of Agriculture and Stock AGS/J1079 file 3760. 1936. Report on number and area of Timber Reserves, undated 1936.

Establishment of specific koala sanctuaries had also been considered at a national level. The fauna authorities discussed koala conservation at the 1937 Fauna Authorities Conference. They considered that the koala was facing extinction and discussed conservation measures⁷². They discussed establishing sanctuaries for koalas in suitable habitat and sending koalas from Victoria to South Australia to start a wild colony in that state, and they passed the following recommendation:

"That with a view to the preservation of the koala action be taken in each state to discover and set aside suitable areas of land with food trees suitable to the koala - these reserves to be then managed as koala stock farms; also that a koala committee be constituted to advise the authorities in each state".

Koala restocking

In October 1927, the Minister for Agriculture and Stock announced that a scheme had commenced for restocking districts denuded of their native fauna with fauna from districts where it was still plentiful⁷³. In October 1928 the Under Secretary, Department of Agriculture and Stock, wrote that the Department has "from time to time, arranged for the liberation of opossums and native bears at suitable centres, and has now under consideration a scheme to extend this action to suitable islands adjacent to the coast"⁷⁴. This statement implies that translocation was not uncommon. Table 6 has a list of known translocations. It is likely that additional translocations occurred that were either not recorded in the archived correspondence, or were not found during our searches.

In an effort to increase the breeding populations of possums and koalas and restock areas from which they had disappeared or where they had not occurred, animals were released at suitable locations. A number of koalas in one lot of 10 and a second lot of 15 were transported from "Dululu" in the Dawson Valley to Emu Vale near Warwick in 1922 and 1923, and were reported to have bred well⁷⁴. Mr J.G. Sinclair received approval to translocate koalas and possums to Woody Island in Hervey Bay for farming in 1922⁷⁵. However, there is no indication if this proposal went ahead.

*The Queenslander*⁷⁶ reported that the Department of Agriculture and Stock released 10 koalas on Mt Coot-tha in 1927 on the "thickly timbered slope of the hill near the dams". The procedure included taking "fingerprints" of the animals for identification. The article also noted that koalas were already present on the reserve. (Koalas have fingerprints somewhat similar to those of people (Henneberg *et al.* 1997).)

Translocations continued after the koala harvest ceased, and were extended to other islands off the coast. In 1928, Ranger A.K. Williams arranged for the release of koalas on Keppel Island Sanctuary, off the central Queensland coast⁷⁷. Other translocations included Magnetic Island, stocked in 1931 with 14 koalas trapped at Bowen⁷⁸. Two of these were released at the Experiment Station and 9 were released at Horseshoe Bay, while 3 died. The settlers at Arcadia on Magnetic Island requested a further six koalas for their area and this was approved. In total, 16 animals were released, nine at Horseshoe Bay and seven at Arcadia. A request was made to stock Hayman Island with koalas from the Bowen area in 1934 but it seems to have been denied as there was no permanent water there⁷⁹. The Under Secretary, Department of Agriculture and Stock, also proposed a translocation to Hinchinbrook Island in 1931⁷⁸. No evidence was found that this took place.

Koalas were released on St Bees Island in 1938 (Berck 1995). This appears to have been an initiative of the Busuttin family rather than a government-sponsored translocation. No record of this was found in departmental correspondence. Translocation from St Bees Island to Brampton and Newry Islands followed in 1960-68 (Berck 1995).

Possum restocking

In 1923, Mr MacDonald, Assessing Land Commissioner in Charleville, when commenting on the scarcity of possums in western Queensland, suggested that the western rivers should be restocked⁸⁰. The Department of Agriculture and Stock noted in 1932 that, "it is apparent the opossum is not now plentiful, except in isolated regions, and it is evident that unless breeding is stimulated by distribution of this native animal to suitable districts, trapping will be of no commercial importance for some considerable time"⁸¹.

⁷² Queensland State Archives: Department of Agriculture and Stock. AGS/J1 195 file 18382. 1937. Minutes of 1937 Fauna Authorities Conference, 14-16/9/1937.

⁷³ *The Queenslander*; 27/10/1927.

⁷⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 5882. 1922-1923. Letters from W. Mewes 2/9/1922, 22/3/1923; Memo about relocation 28/7/1922; Letters from Under Secretary, 6/9/1922, 28/3/1923.

⁷⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 11521. 1922. Memo about release of koalas and possums on Woody Island for farming, 18/5/1922.

⁷⁶ *The Queenslander*; 6/10/1927. Article, p 41: "Ten Bears. Release at Mt Coot-tha. At Home in the Treetops".

⁷⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J855 file 20026. 1932. Memo from Ranger A.K. Williams, 10/10/1932.

⁷⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J812 file 11569. 1931-1932. Correspondence concerning release of koalas on Magnetic Island: Letter from G. Lloyd-Apjohn, 1/6/1931. Letter from A.J. Keeler 20/10/1931. Memo from Under-Secretary, 27/10/1931. Memo from W.R. Holmes, 11/11/1931. Memo from Under-Secretary, 13/11/1931. Memo from W.R. Holmes 25/11/1931. Memo from W.R. Holmes, 3/3/1932.

⁷⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J933 file 2998. 1934. Letter from Commercial Bank of Australia, 11/6/1934; Letter from Under Secretary, 18/6/1944; Telegram from Under Secretary, 26/6/1934.

⁸⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Summary of reports on open season, 26/3/1923.

⁸¹ Department of Agriculture and Stock. Annual Report 1931-1932. Protection of Native Fauna p. 13. Queensland Parliamentary Papers 1932 Vol. II pp 356-360.

Table 6. Known translocations of koalas and possums. Sources of data are shown at foot of table.

Date	Source	Destination	No. animals	Proponent	Comments/Source
Koala translocations					
1922	Dululu, Dawson Valley	Emu Vale (Warwick)	10	W. Mewes, Emu Vale	1
1923	Dululu, Dawson Valley	Emu Vale (Warwick)	15	W. Mewes, Emu Vale	1
1927	?	Mt Coot-tha (Brisbane)	10	Dept Ag & Stock	2
?1927	?	Junabee (Warwick)	?		3
1928	?	Keppel Island	?	A.K. Williams, Ranger	4
1931-32	Bowen	Magnetic Is	16	Island residents, A.J. Keeler, G.Lloyd-Apjohn.	5
1938	Proserpine region	St Bees Is		M. Busuttin, lessee	Berck 1995
1960-68	St Bees Is	Brampton Is			Berck 1995
1960-68	St Bees Is	Newry Is			Berck 1995
Proposed koala translocations					
1922	Hervey Bay area?	Proposed translocation to Woody Island	?	Mr J.G. Sinclair	6
1931	Bowen	Proposed translocation to Hayman Island		E.M. Embury	Not approved due to lack of permanent water: 7
1931	Bowen	Proposed translocation to Hinchinbrook Is	6	Under Secretary, Dept Ag & Stock	Did not proceed? 5
Possum translocations					
1932	Torilla Holding	Malvern Downs (Capella)	141	Dept Ag & Stock	4, 8, 9
1932	Torilla Holding	Nalcombe Station (Springsure)	295	Dept Ag & Stock	4, 8, 9
1932	Torilla Holding	Talagai Sanctuary (Clermont)	150	Dept Ag & Stock	4, 8, 9
1932	Torilla Holding	Pikedale Station (Stanthorpe)	149	Dept Ag & Stock	4, 8, 9
?	Tasmania	?			10
1933	Wilston, Brisbane Botanic Gardens	Blunder	18		11
1932-33	?	Silverwood Dam (Stanthorpe)	8		12
1934	Guthalunga (Bowen)	Hayman Is	40	E.M. Embury	7
Proposed possum translocations					
1922	Hervey Bay area?	Proposed translocation to Woody Island	?	Mr J.G. Sinclair	6
1936	Braemar State Forest	?	?	J.H. Waters	Did not proceed? 13

Sources:

- Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 5882. 1922-1923. Letters from W. Mewes 2/9/1922, 22/3/1923; Memo about relocation 28/7/1922; Letters from Under Secretary, 6/9/1922, 28/3/1923.
- The Queenslander, 6/10/1927. Article, p 41: "Ten Bears. Release at Mt Coot-tha. At Home in the Treetops".
- Queensland State Archives: Department of Agriculture and Stock. AGS/J464 file 2453. Letter from T. Brewer, Queensland Producers Association, 17/7/1927.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J855 file 20026. 1932. Memo from Ranger A.K. Williams, 10/10/1932.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J812 file 11569. 1931-1932. Correspondence concerning release of koalas on Magnetic Island: Letter from G. Lloyd-Apjohn, 1/6/1931. Letter from A.J. Keeler 20/10/1931. Memo from Under-Secretary, 27/10/1931. Memo from W.R. Holmes, 11/11/1931. Memo from Under-Secretary, 13/11/1931. Memo from W.R. Holmes 25/11/1931. Memo from W.R. Holmes, 3/3/1932.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 11521. 1922. Memo about release of koalas and possums on Woody Island for farming, 18/5/1922.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J933 file 2998. 1934. Letter from Commercial Bank of Australia, 11/6/1934; Letter from Under Secretary, 18/6/1944; Telegram from Under Secretary, 26/6/1934.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J855 file 20026. 1932. Memo from Ranger Dendle on release of possums at Nalcombe, 2/11/1933. Memo from the Under Secretary re: trapping additional possums, 25/11/1932.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J855 file 933. 1933. Memo to the Minister about the trapping of possums at Torilla, 2/2/1933; Memo from Ranger Dendle about inspection of release sites, 16/9/1933.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J928 file 933. 1933. Memo concerning obtaining possums from Tasmania, 13/11/1933.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J928 file 933. 1933. Letter from M.J. Coldclough re: release of possums at the Blunder, 4/4/1933. Memo from the Under Secretary, 24/2/1933.
- Queensland State Archives: Department of Agriculture and Stock. AGS/J928 file 933. 1933. Clipping The Daily Mail, 7/2/1933, Back to the gum trees (re: Silverwood Dam).
- Queensland State Archives: Department of Agriculture and Stock. AGS/J1079 file 3760. 1936. Letter from J. H. Waters, Kumburilla, re: Braemar State Forest, 18/5/1936.

From November 1932 to January 1933, 623 Common Brushtail Possums were trapped at Torilla Holding via Kunwarara, central Queensland^{77, 82, 83}. Of these, 585 were transported to places in thought to be need of restocking, including Malvern Downs (141 animals) in the Capella District, Nalcombie Station (295 animals) in the Springsure District, and Pikedale Station near Stanthorpe (149 animals)⁸³. In 1933, the Annual Report of the Department reported that considerable numbers of opossums were released in the Springsure, Clermont and Stanthorpe Districts⁸⁴. These introductions seem to have been successful. Nine months after the introduction of animals to Malvern Downs and Nalcombie, the Ranger reported good "traces" of possums⁸³. A similar but longer snare than that used to trap possums during the skin season was used to snare possums alive (Figures 4 and 5). Special cages were constructed to transport the possums (Figure 6) and thought went into partitioning the cages, the bedding and feed needed and other conditions of transport. The animals travelled by train, accompanied by a Ranger. Old, sick and injured animals, as well as animals which had not adjusted well to captivity, were freed in a familiar area before the journey started. Care was taken in releasing the animals in suitable habitat (Figure 7). A total of 45 animals died⁸³.



Figure 4. Snare for live trapping possums. (Queensland State Archives: Department of Agriculture and Stock AGS/J855. 1932.)

In addition, to help boost possum numbers, possums were said to be imported from Tasmania, although there is no record of when they arrived or where they were released^{85, 83}. In 1933, 18 possums from Wilston (a suburb of Brisbane) and the Brisbane City Botanic gardens were released at the Blunder, 16 miles from Brisbane⁸⁶. Silverwood Dam near Stanthorpe was the site of the liberation of a further eight possums of unknown origin late in 1932 or early in 1933⁸⁷. In 1934, Mr E.M. Embury successfully applied to transport 40 possums from



Figure 5. Snare on sapling for live trapping possums, with snared possum. (Queensland State Archives: Department of Agriculture and Stock AGS/J855. 1932.)



Figure 6. Cage for transport of possums. (Queensland State Archives: Department of Agriculture and Stock AGS/J855. 1932.)

⁸² Queensland State Archives: Department of Agriculture and Stock AGS/J855 file 20026. 1932. Memo from Ranger Dendle on release of possums at Nalcombie, 2/11/1933. Memo from the Under Secretary re: trapping additional possums, 25/11/1932.

⁸³ Queensland State Archives: Department of Agriculture and Stock AGS/J855 file 933. 1933. Memo to the Minister about the trapping of possums at Torilla, 2/2/1933; Memo from Ranger Dendle about inspection of release sites, 16/9/1933.

⁸⁴ Department of Agriculture and Stock Annual Report 1932-1933. Protection of Native Fauna p. 14. Queensland Parliamentary Papers 1933 Vol. II p. 533.

⁸⁵ Queensland State Archives: Department of Agriculture and Stock AGS/J928 file 933. 1933. Memo concerning obtaining possums from Tasmania, 13/1/1933.

⁸⁶ Queensland State Archives: Department of Agriculture and Stock AGS/J928 file 933. 1933. Letter from M.J. Colclough re: release of possums at the Blunder, 4/4/1933. Memo from the Under Secretary, 24/2/1933.

⁸⁷ Queensland State Archives: Department of Agriculture and Stock AGS/J928 file 933. 1933. Clipping The Daily Mail, 7/2/1933, Back to the gum trees (re: Silverwood Dam).

Bowen to Hayman Island ⁷⁹. In 1936, Mr J.H. Waters of Kumbarilla advocated catching possums in districts where they were pests and transporting them to areas where there were few or no animals ⁸⁸. He suggested that the Braemar State Forest had sufficient numbers for this purpose. No evidence was found that this took place.



Figure 7. Removal of snared possum. (Queensland State Archives: Department of Agriculture and Stock, AGS/J855. 1932.)

Operation of the industry

Trappers and dealers

Trappers

A person harvesting koalas or possums was referred to as a "trapper", defined in the 1924 Act (s.3) as a person engaged in the occupation of securing animals or birds under a permit. The term included all means of capture or take, including shooting as well as snaring. A wide range of rural people carried out trapping. Deputy Forester Carter observed in 1923, with regard to the Kilcoy region, "school boys, Mill hands and Stock Riders, and all class of workers got a License"⁸⁰. In the St Lawrence district in 1922, "Station hands, Squatters, & Graziers Sons were all 'on the job', 'possum choking' "⁸⁹. It was a part time occupation in many areas for selectors' sons. Froggatt (1904) describes farm boys hunting possums on the Murray River in the 19th century. Trappers often hunted dingoes, wallabies and kangaroos

as well as possums and koalas and there was a group of people that could be described as professional trappers, who apparently made a living primarily from mammal harvests (Rolfe 2001). In 1923, the Stock Inspector at Hughenden wrote that possum trapping was not an occupation in itself, but worked in conjunction with kangaroo and wallaby shooting ⁸⁰.

People commonly left their work to trap, and trappers included women and children. Open seasons were recognised in departmental correspondence as causing problems for retention of farm labour as workers left their jobs to take up trapping when a season was opened. Some reports recommended timing the open seasons to avoid shearing times so as to cause less labour problems for property owners. Some trappers were semi-itinerant, moving between districts. For the 1922 season, the Stock Inspector at Crows Nest reported that there were two camps of three trappers, which shifted owing to the scarcity of possums, and "local lads" found few possums⁸⁰.

It was felt by Stock Inspector Shepherd at Warwick that life as a trapper had an unhealthy effect on boys ⁸⁰. In 1923, Mr MacDonald, Assessing Commissioner in Charleville, expressed a very poor opinion of those who trapped for a living as opposed to those who trapped as a source of extra funds. He felt they were a "degraded crowd" and "are not a desirable class" and stated, "Children do most of the work, and in many cases are poorly fed, live in dirty surroundings, get little or no education and are not likely to grow up to be useful citizens of the State, rather the reverse" ⁸⁰.

In later years, the trapping industry became caught up in government social policy when attempts were made to target trapping permits at *bona fide* trappers and/or the unemployed. In order to ensure that only "legitimate" trappers obtained permits during the 1923 possum season, the Clerks of Petty Sessions were instructed by the Under Secretary Department of Agriculture and Stock not to issue permits to boys under 16, women, or persons in regular employment ⁹⁰. The 1925 Regulations restricted permits to *bona fide* trappers for whom trapping was the principal source of income during the season (s.4 1925 Regulations). These measures were meant to exclude part-time trappers, who trapped part-time while holding other employment. Similarly, from the mid-1920s, property owners were only permitted to trap on their own property (s.12 1925 Regulations) to ensure that they did not monopolise areas, and that possums were available for the *bona fide* trappers. These restrictions indicate the sensitive nature of the industry. Selectors and rural workers saw the trade as their saviour during hard times, such that it became an element in anti-squatter sentiment as squatter

⁸⁸ Queensland State Archives: Department of Agriculture and Stock, AGS/J1079 file 3760. 1936. Letter from J. H. Waters, Kumbarilla, re: Braemar State Forest, 18/5/1936.

⁸⁹ Queensland State Archives: Department of Agriculture and Stock, AGS/J201 file 23/2003. 1923. Memo from Land Ranger P. Smyth, 31/1/1923.

⁹⁰ Queensland State Archives: Department of Agriculture and Stock, AGS/J201 file 23/2003. 1923. Memo from Under Secretary re: ban on permits for boys, women, and the employed, 12/6/1923.

organisations opposed the harvest. However, others saw it as unemployment relief for unemployed labourers, while Governments were under increasing pressure from the wider community to restrict it or even close it down as it was seen as inhumane and a threat to the survival of the species.

The possum and koala trapping industry started out as just another rural occupation, in an economic environment where it was often difficult to obtain secure or continuous employment or income. However, the developing community opposition to koala trapping (from about 1919) and possum trapping (in the 1930s), combined with concern for the unemployed, led to a view that trapping should be used primarily to assist the unemployed. The "sacrifice" of koalas was more easily justified if it went to aid the unemployed. From about 1920, there was an ongoing debate over who was worthy of getting permits. Land Ranger Smyth, Mackay, wrote in 1923: "I am of opinion permits to trap should not be granted indiscriminately and only to persons in poor circumstance and I feel sure the Commissioner does not approve of persons mentioned in paragraph (b) [i.e. "Storekeepers, Large Graziers and Squatters Sons"] holding permits"⁹¹. There was an official desire to target the unemployed, but in practice this proved difficult as trapping was carried out most efficiently by skilled men with plant and equipment.

Although possum trapping came to be seen as a means of providing relief for the unemployed, it generally failed in this aim. The need for relatively expensive plant and equipment operated against community and official desires to use the trade as a means of relieving unemployment. Mr Black, Ranger at Mackay, on 20 June 1927 (memo to U/S DAS) stated that a bear season would not relieve the unemployment situation very much. "The only men who would go after them, would be those who have horses and necessary equipment and good bushmen"⁹².

In 1923, the Stock Inspector in Mackay reported that trapping was followed by squatters, horse breakers, storekeepers, and in fact by all others except the recognized unemployed⁸⁰. Stock Inspector Taylor, Maryborough wrote on 13 February 1923, "It seems that permits issued last year were availed of mostly by Farmers and their families, Station and General bush workers and were of little benefit to the unemployed"⁸⁰. He wrote

again on 17 February 1925, "It is really an expert job peculiarly suited to bushmen" and "interests principally station hands and Selectors and does not materially affect the unemployed"⁹³. The Forest Factor in Gympie wrote in 1923, "A large number of last seasons trappers were not bona-fide unemployed. In most cases they were selectors"⁹⁴. Many would-be trappers complained that other people had arrived at an area ahead of them and the area was cleaned out as notice had been given too early or that the season was not long enough. Mr D.B. Hurley, Goodnight Scrub, Booyal, wrote in 1923 that farmers and others "buy up the country and make scores and often hundreds of pounds while the real unemployed for whom the season is thrown open have to struggle along in the unwanted corners, on barren ridges or practically treeless wastes, to find most of them already 'cleaned' by the time they get there"⁹⁵.

The total number of permits issued is only available from 1926-1936 after the Opossum Boards commenced operation⁹⁶ (Table 7). The number of permits ranged from 8,124 to 9,412 over the five seasons from 1926-36. Incomplete numbers of permits showing breakdown by Opossum Districts are available for some years from 1922-1936⁹⁶ (Table 8). The data for 1922 and 1923 were calculated by summing data from district reports from police and other officials. Most permits were usually issued in Darling Downs, South-western, Central Coast and Wide Bay Burnett Districts. These figures do not correlate with areas of high possum abundance, and may instead reflect density of people or potential trappers. An example of a trapping permit, issued in 1917, is illustrated in Figure 8. Initially, permits could be used in other districts. From 1926, trappers were restricted to operating only on specified holdings (s.4 1925 Regulations).

Table 7. Total Number of registered trappers (number of permits issued) as reported by Opossum Boards for 1926 to 1936.

Year	No. of registered trappers
1926	9,040
1927	8,124
1929	9,012
1931	9,412
1936	8,479

⁹¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J463 file 2455. 1927. Note of Question on Business Sheet to Secretary for Agriculture and Stock [i.e. Question on Notice in Parliament], 14/12/1927.

⁹² Queensland State Archives: Department of Agriculture and Stock. AGS/J463 file 2455. 1927. Memo from Ranger Black, 20/6/1927.

⁹³ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 545. 1925. Memo from Stock Inspector Taylor re: open season, 17/2/1925.

⁹⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 23/2003. 1923. Memo from Forest Factor, Gympie, re: opening seasons, 12/2/1923.

⁹⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Memo re: Opening of Opossum and Bear Season, Question as to Benefit to the Unemployed, 26/6/1923.

⁹⁶ Queensland State Archives: Department of Agriculture and Stock. (1) AGS/J928 file 10303. 1933. Memo: Opossum seasons, Open seasons since 1915, undated, 1933. (2) AGS/J370 file 50. 1926. List Opossum Districts 1926, Petty Session Districts making up each district and number of trapping permits issued. (3) AJS/J1079 file 3760. 1936. List 14 July 1936 of trappers in Opossum Board Districts to 11 July 1936. (4) AGS/J1079 file 3760. 1936. Numbers of trappers permits issued by district up to 11-7-36.

Table 8. Number of trappers in each Opossum District in 1922, 1923, 1926 and 1936. As district figures were not available for some districts, total permits are less than the state totals (Table 7). Data for 1922 and 1923 were collated from returns by public officials, mainly police. Data for 1936 are only available to 11/7/1936. Total permits for 1936 season, not broken down by district, were 8,479, slightly more than 1000 above the total at 11 July.

District	No. of Trappers 1922	No. of Trappers 1923	No. of Trappers 1926	No. of Trappers to 11/7/1936
Moreton	478	474	809	548
Darling Downs	1,390	1,293	739	1,281
South-Western	1,185	1,499	909	719
Wide Bay and Burnett	1,747	1,041	1,470	1,400
Central Coast	1,112	1,922	1,151	1,704
Central West	342	454	535	452
Northern Coast	348	292	438	766
Northern	311	570	384	597
TOTAL	6,913	7,545	6,435	7,467

11225

For Opossum Only

"The Native Animals Protection Acts, 1906 to 1910."
(Section 6.)

PERMIT AS TRAPPER OF NATIVE BEARS OR OPOSSUMS.

IN pursuance of the provisions of the abovementioned Acts, and subject thereto, AUTHORITY IS BY THIS PERMIT GRANTED to *James Alfred Cairns* of *Boorah* in the Petty Sessions District of *Boorah*, in the State of Queensland, to carry on the occupation of a trapper of ~~Native Bears~~ or of Opossums, for the year 1917, from 1/5/17 to 31/10/17.

Dated at *Boorah*, this *26th* day of *April*, 1917.

W. J. Cameron
Clerk of Petty Sessions.

Fee: 2s 6d.

No 29419

"The Native Animals Protection Acts, 1906 to 1910."
(Section 6.)

PERMIT AS TRAPPER OF NATIVE BEARS OR OPOSSUMS.

IN pursuance of the provisions of the abovementioned Acts, and subject thereto, AUTHORITY IS BY THIS PERMIT GRANTED to *J. A. Cairns* of *Canningra* in the Petty Sessions District of *Boorah* in the State of Queensland, to carry on the occupation of a trapper of Native Bears, or of Opossums, for the year 1918.

Dated at *Boorah*, this *1st* day of *July*, 1918.

Geo. D. Fairfield
Clerk of Petty Sessions.

Fee: 2s. 6d.

Figure 8. Opossum trapping permits, 1917 and 1918. In the 1918 permit, the Clerk has omitted to delete "Native Bears" from the body of the permit in error. (Queensland State Archives: Department of Agriculture and Stock. AGS/J110. 1920. Trapping permits.)

Dealers

Dealers, based at major towns in Queensland, held auctions of skins on behalf of trappers. Some dealers also purchased and exported skins in their own right. Dealers formed an influential pressure group, reminding governments of the value of the industry to the economy and of the need to establish a sustainable industry. Dealers became regulated under the 1921 Act and Regulations (s.1 1922 Regulations). They were required to be registered and to keep records of purchases and sales. From 1926, they had to make returns of purchases and sales (ss. 18A, 18B, 19, 1925 Regulations).

Harvest methods

Three main techniques were used in taking possums and koalas for their skins. A common method was the use of cyanide to poison possums. Cyanide baits were usually mixed with flour and made into pellets, though "cyanide water" could also be used. The baits were laid at the base of trees or sometimes plastered on the trunk of a tree above the reach of stock. 10,000 to 12,000 baits could be laid at a time in lines three to four miles long⁹⁷. Gangs of people laid long lines of bait and rode back the following morning to collect the possums. They did not return after that, with the result that the baits continued to kill possums that were not collected^{97,98}.

Recipes for baits included 1/8 lb cyanide dissolved in a 7 lb treacle tin of boiling water, to which flour or pollard was added to make a paste. This was rolled out and cut into about 600 baits⁹⁷. A second recipe that was said to be very attractive to stock included potassium cyanide, spice and eucalyptus oil mixed with the flour or pollard⁹⁸. The eucalyptus oil was supposed to enable possums to smell the baits from a greater distance.

While trappers felt the cyanide baits deteriorated within three days, this was not always the case. As well as killing stock, forgotten baits killed possums long after a trapper had left an area, and stories of possum skeletons found in tree hollows and logs were common. In the debate on the Act⁹⁹, it was said cyanide destroyed a large number of animals that were never gathered up. Mr A. Rake of Marlborough wrote on 1920, "It was simply scandalous last season the way cyanide was used, some men making little fortunes, while the honest trapper and snarer did not make one tenth as much. Dead possums were laying about

in hundreds, to say nothing of those that died in hollows unseen"¹⁰⁰. Alec Chisholm wrote that, in the Murilla electorate, tree fellers reported that all hollow trees had possum skeletons, due to possums taking minor doses of cyanide and retreating to the trees to die¹⁰¹. Cyanide was also viewed as an indiscriminate poison, killing females with dependent young.

Reports on possum seasons mentioned that experienced dealers could tell the difference between skins from animals that had been snared and that had been poisoned with cyanide. In 1910 the Chief Inspector of Stock provided to the Minister five opossum skins obtained by different methods, including one snared under the forearms, one snared around the loins, two caught by cyanide water and one caught by cyanide paste¹⁰². In those poisoned with cyanide, the blood veins showed prominently in the skins.

Many observers also said that koalas took cyanide baits. In 1924 in his report on "Opening Trapping Season Opossum's & Native Bears", the Land Commissioner for Clermont and Springsure Districts said "Regarding the supposed disease that has broken out amongst native bears, I consider that a great percentage of the deaths are attributable to the indiscriminate use of cyanide [sic] baits laid by opossum trappers. Of course when you attribute this cause, the trapper and others interested in the fur trade they will remark that Cyanide [sic] baits are useless after three days, certainly that is so in regards to instantaneous death which the trapper desires to catch the opossum, but the baits picked up by the native bear will cause a lingering death"¹⁰³. The Land Ranger from Blackall expressed a similar opinion¹⁰⁴. Current knowledge of koala diet indicates that koalas are highly unlikely to take flour- or water-based bait, and that these statements are quite erroneous. The statements also indicate the lack of expertise among some government officials. Howlett (1979) described another method of using cyanide. A jam tin of water with cyanide in solution was placed at the foot of a tree, or near a hollow log, for possums or koalas to drink. It is difficult to assess the effectiveness of this method for either species, particularly koalas. Even if koalas did drink the water, it seems unlikely that it would be very effective. To be useful, most koalas would have to drink it, and they would have to drink enough water to ingest a lethal dose.

⁹⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A. 1909. Memos about Use of cyanide in the destruction of marsupials, 26/11/1909.

⁹⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A. 1909-1910. Letter from S.R.C. Harding about use of cyanide, 20/10/1909; Letter from Mr Appel about use of cyanide, 22/10/1910.

⁹⁹ Queensland Hansard: Vol 97 July to November. 1906. pp. 822-823. Fourth Session, Fifteenth Parliament. Legislative Assembly. 14 August 1906. Native Animals Protection Bill, Second Reading. Debate.

¹⁰⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/J110. 1920. Letter from A. Rake to E J Scriven, U/S Agriculture and Stock, 20/1/1920.

¹⁰¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Letter from A. H. Chisholm, 1/6/1923.

¹⁰² Queensland State Archives: Department of Agriculture and Stock. AGS/N350 file 6286. 1909. Letter from T. O'Keefe, Duaringa, 23/11/1909.

¹⁰³ Queensland State Archives: Department of Agriculture and Stock. AGS/J262 file 2003. 1924. Memo from P.J. Higgins, Land Commissioner, Emerald, 24/2/1924.

¹⁰⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 545. 1925. Memo from Mr McInerney, Land Ranger, Blackall, 27/1/1925.

The second method of trapping was with snares. The snare illustrated in Figure 4 was used to live-trap possums for relocation, and was longer than those used when trapping for skins. The usual method of snaring was to attach snares to a sapling that was leaning against a tree. Opossums used the sapling to get up and down the tree. It was assumed young opossums escaped the snare because of their small size¹⁰⁵. Snares did not generally harm stock, were reusable and were much more likely to be collected by a trapper when he left an area. However, this did not always happen, with harmful results for possums. Snaring was the preferred method under the Acts. Some trappers felt snares could mar the skins making them less valuable. This method was also indiscriminate, killing females with both pouch and back young, which would not survive long after their mother's death.

Some observers implied that snares were also used for taking koalas. In 1929, Noel Burnett wrote to the Premier Mr A.E. Moore¹⁰⁶ stating that native bears and other animals were just as likely to perish in traps (that is, snares) set for possums on trees as the possums themselves. However, current knowledge of koala behaviour again would indicate that koalas were unlikely to be captured in a snare.

The third method, always used for koalas in particular, was shooting, usually with a .22 calibre rifle¹⁰⁷. In 1925, a police officer at Aramac observed, "These animals [i.e. koalas] are always shot, a person would not earn bootlaces trapping them"¹⁰⁸. Koalas were large enough for shooting to leave a largely unmarred skin. Although possums were also shot, some trappers felt that shooting marred their skins. Spotlights and torches were used at night when shooting possums, although they were made illegal under the 1922 Regulations. Carbide lights were introduced about 1918 or 1919 (Johnston 1982). As with cyanide, spotlighting was thought to result in over-harvesting and hence could threaten the survival of the species. Mr Hiron of Raglan described how shooters from nearby towns arrived in motor lorries and worked along "creeks in a face with lamps & guns & every possum is slaughtered as these spotlights never leave one behind"¹⁰⁹. In theory, females with back young or very large pouch young should often

have been identified and left for a later time. In practice, trappers gave little thought to conserving breeding stock or young animals, and these females were readily taken.

Shooting was probably the most expensive of the three hunting methods, although in some cases cartridges could be reloaded and reused. However, this is time consuming, and inconvenient to do in bush camps. Reports on possum seasons mentioned that fulltime trappers seldom used shooting, which was more commonly used by weekend or casual trappers. Cyanide was relatively cheap and the quantity used small. The price of wire for snares was greater but snares could be reused.

Professional trappers were set up with plant, which might include horses and a dray for carrying equipment and skins. The A/Police Sergeant at Yuleba reported in 1923 that opossuming had become a regular profession and a man required either plenty of credit at a storekeeper or a big cheque behind him. An "opossumer, must have a waggonette and from 3 to 5 horses, a tank, about £25 worth of wire and from £25 to £30 worth of food"¹¹⁰.

Bear dogs were used by at least some trappers to locate koalas. For example, correspondence from Ranger J.H. Dendle and police correspondence refer to a bear dog being used by koala trappers in central Queensland¹¹¹. No other references to bear dogs were found. Possibly it was not practical for trappers to keep trained dogs and make extensive use of them when koala seasons were opened only infrequently and often only for short periods. One report in 1923 referred to use of possum dogs also, "The only trappers that made anything last season were those who owned a good opossum hunting dog; they would hunt with their dog on a moonlight night and in this way managed to secure a few skins"¹¹².

Farming

Over the years, a number of possum farming schemes were proposed. None seems to have been successful. In 1919, Mr McPaul, a trapper from Rockhampton, asked for a permit to keep 200 possums for farming¹¹³. Mr F. West wrote to the Department of Agriculture and Stock about a possum farming scheme near Townsville in 1920. He had a stock of 400 possums of

¹⁰⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/N350. 1906. Deputation from Brisbane Stock and Produce Agents Association, 8/9/1906.

¹⁰⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J565 file 29/604. 1929. Letter from Noel Burnett re: Open Season for Opossums, 24/6/1929.

¹⁰⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 23/2003. 1923. Memo from Land Ranger P. Smyth, 31/1/1923.

¹⁰⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 545. 1925. Memo from Sub Inspector A.J. Loch, Aramac, 20/1/1925.

¹⁰⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J1079 file 3760. 1936. Letter from H.C. Hiron, Raglan, 13/5/1936.

¹¹⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Memo re: status of bears and opossums at Yuleba, 24/1/1923.

¹¹¹ Queensland State Archives: Department of Agriculture and Stock. (1) AGS/J463 file 2455. 1927. Memo from Ranger Dendle, Springsure, 10/9/1927. (2) AGS/J523 file 3315. 1927. Statement from Mr J.A.B. Parker, Springsure, 14/9/1927.

¹¹² Queensland State Archives: Department of Agriculture and Stock. AGS/J201 file 2003. 1923. Memo from Stock Inspector C.E. Ellis, 23/3/1922.

¹¹³ Queensland State Archives: Department of Agriculture and Stock. AGS/J110 file 80. 1919. Letter from E. McPaul about possum farming, 10/9/1919.

“all kinds” but eventually had to dispose of them as he did not have the funds to improve their condition. He attributed his failure to lack of resources for food and wire netting¹¹⁴. In 1922, applications for possum farming were received from Medway Station near Bogantungan, Sunrise near Mitchell, and Mr Healey of Brisbane¹¹⁵. There is no indication that these farms were ever established. Approval was given for these proposals, subject to the restriction that they could only sell skins in open seasons, which were relatively brief (Table 1). This restriction would have severely hampered the profitability of the proposed farms and probably would have made them unviable.

Farm proposals generally involved the construction of fenced enclosures on 1-2 acres of ground with hutches or hollow logs for housing. However, the proposed translocation of possums and koalas to Woody Island for farming in 1922 (see above) apparently involved a free-range farm, rather than use of caged animals.¹¹⁶ Other correspondence made a brief reference to an opossum farm at Black Mountain, Canberra, in the 1930s¹¹⁷.

Mr W.A. Swan from Amiens proposed a possum farming scheme in 1936¹¹⁸. He attributed the failure of previous schemes to the ability of possums to escape from an enclosed area by climbing. He suggested establishing a high stocking rate of 50 to 100 animals per acre of timbered ground, that they be forced to live in hutches by removing all hollow timber, and made the assumption that the natural rate of increase was 3 young per female every two years. He estimated this would produce a gross income of £17 10s [17 pounds and 10 shillings] per acre per annum. He compared his scheme with the farming of foxes for fur in North America.

Harvest data

Data on the number and value of skins harvested were obtained from correspondence in departmental files and Annual Reports of the Department of Agriculture and Stock. Before the 1921 Act came into force, dealers were not required to report the number of skins sold in a season. Data for some earlier seasons were estimated by the Department of Agriculture and Stock, or obtained by the Department from skin dealers. For some years, data from different sources are in conflict and the figure that appears most accurate was used in Table 9. For

example, in reply to a question asked of the Secretary for Agriculture and Stock on 14th December 1927, estimates of the number of koala skins taken in that year were given as 597,985 skins¹¹⁹. Later, in 1928, the Annual Report gave the total as 584,738, about 13,000 skins fewer¹²⁰. Major discrepancies between data from different sources are listed in Table 9.

Estimated harvests for koalas from 1903-1906 were 450,000 to 500,000 koalas per annum, with an estimated possum harvest of 3,000,000 animals in 1906 (Table 9). The size of harvests prior to this time is unknown.

After the harvest came under the control of the Acts (after 1906), the koala take ranged from about 450,000 to nearly 1,000,000 skins per season (Table 9). However, data are only available for two of the six open seasons during this period. The known possum take ranged from about 400,000 to 3,000,000 per season (Table 9). Possum harvests were higher than koala harvests in the years where data are available. Data are not available for different species of possums. However, data from London sales (for all States) show “ringtails” and “Opossums” separately for some years, with ringtails forming about 18 percent of skins offered and 7 percent of skins sold (Table 10). “Opossums” in this context probably comprise mainly *T. vulpecula*, with some *T. caninus*. “Ringtails” are likely to comprise mainly *P. peregrinus*. There may be a small component of north Queensland ringtails (Lemuroid Ringtail *Hemibelideus lemuroides*, Green Ringtail *Pseudochirops archeri*, Daintree River Ringtail *Pseudochirulus cinereus*, and Herbert River Ringtail *P. herbertensis*).

Owing to the widespread practice of taking outside the open season, the actual harvest period was wider than the official open season periods shown in Table 1. Some comments in Departmental correspondence state that most of the illegal take occurred up to two to three months before each open season, when trappers collected skins either in expectation of an open season, or because the season had been announced early. The lower value of summer skins may also have discouraged trappers from commencing too early. The large harvest in 1919 of nearly one million koalas (over one million according to some accounts) probably includes a large illegal take spread over a longer period than the six months of the open season.

¹¹⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J 110 file 80. 1920. Letter from F. West, 5/8/1920.

¹¹⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 11521. 1922. Letter from P. Healey 16/8/1922; Letter from E. Donaldson, Medway Station, 26/6/1922, 24/7/1922; Letter from D. Green, Sunrise, 17/8/1922.

¹¹⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J305 file 11521. 1922. Memo about release of koalas and possums on Woody Island for farming, 18/5/1922.

¹¹⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J1190 file 14462. 1937. Report on mistletoe as a food source for possums, from H.E. Young to Secretary Sub-Department of Forestry, 11/11/1937.

¹¹⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J1106 file 14892. 1936. Proposal by W.A. Swan for an opossum farming scheme, 29/5/1936.

¹¹⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J463 file 2455. 1927. Note of Question on Business Sheet to Secretary for Agriculture and Stock [i.e. Question on Notice in Parliament], 14/12/1927.

¹²⁰ Department of Agriculture and Stock. Annual Report 1927-1928. The Animals and Birds Acts p. 14. Queensland Parliamentary Papers 1928.

Table 9. Annual number of koala and possum skins traded by dealers in Queensland and their value (amounts received at auction in Queensland, in Australian pounds). Data are not available for all open seasons. Some sources give significantly different totals (see Note below table). "Source" refers to source of data, below table.

Year	No. Koala Skins	Koala Value (£)	No. Possum Skins	Possum Value (£)	Source
1903	500,000	91,000			1
1905	500,000				2
1906	450,000	26,000	3,000,000	105,000	3
1909				156,398	4
1917			416,000	104,000	5
1918			433,138	129,940	5
1919	865,006		3,093,386		see Table 11
1920			3,000,000	750,000	6
1922			1,131,442	282,860	5
1923			1,411,014	300,000	6, 7
1926			2,485,876	592,096	8, 9
1927	584,738	137,742	1,014,632	240,281	8, 9
1929			2,032,979	516,530	9
1931			1,696,831	131,182	10
1936			2,239,657	346,395	10

Note. Major discrepancies in estimates are shown below:

1919 - Combined total of koala and possum skins = 2,250,000 (Dept. Agriculture and Stock Annual Report 1923-1924. P. 26, The Animals and Birds Act. Qld Parliamentary Papers, 1925.)

1919 - Number of koala skins = 1,000,000. Deputation to Minister 21/4/1922, Letter from Minister 23/2/1920. Qld State Archives: Dept. of Agriculture and Stock. 1922: AGS/J150 file 379. Notes on a deputation to the Minister for Agriculture, 21/4/1922. 1924: AGS/J262 file 2003D. Memo from Mr Gillies re meeting with Mr Mattingley, 31/1/1924. Qld State Archives: Dept. Agriculture and Stock. AGS/J110 file 80. 1920. Letters from Secretary for Agriculture and Stock to F.M. Forde 23/2/1920, to W. Dunstan, 25/2/1920.)

1919 - Number of possum skins = over 2,250,000 (Dept. Agriculture and Stock, Annual Report 1919-1920. P. 22, Native Animals Protection Act. Qld Parliamentary Papers 1920.)

1923 - Number of possum skins = 1,200,000 (Dept. Agriculture and Stock Annual Report 1923-1924. P. 26, The Animals and Birds Act. Qld Parliamentary Papers, 1925.)

Sources:

1. Qld Hansard: Vol 93, July to November 1904. Pp 1024 -1025, 1st Session, 15th Parliament. Legislative Council, 30th November 1904. Native Bear Protection Bill, Second Reading Debate.
2. Dept. Agriculture and Stock Annual Report 1905-1906. p. 8, Native Bears. Qld Parliamentary Papers, 1906.
3. Qld State Archives: Dept. Agriculture and Stock AGS/N350A. 1907. Undated note on the skin trade, re: Bill for Protection of Certain Native Animals.
4. Dept. Agriculture and Stock, Annual Report 1911-1912. Native Animals Protection Act, pp. 27 - 28. Qld Parliamentary Papers 1912.
5. Qld State Archives: Dept. Agriculture and Stock. AGS/J262 file 2003. 1923. Notes/Memo with lengths of open seasons and number and value of possum skins taken, 1917 to 1923.
6. Dept. Agriculture and Stock Annual Report 1923-1924. The Animals and Birds Act p. 26. Qld Parliamentary Papers, 1925.
7. Qld State Archives: Dept. Agriculture and Stock. AGS/J928 file 2003. 1923. Number of opossum skins handled by dealers during 1923 open season, November 1923.
8. Qld State Archives: Dept. Agriculture and Stock. AGS/J546 file 27/16835. 1928. Letter from Under Secretary to Chief Secretary's Department, N.S.W. 11/10/1928.
9. Qld State Archives: Dept. Agriculture and Stock. AGS/J928 file 10303. 1933. Memo: Opossum seasons, Open seasons since 1915, undated, 1933.
10. Qld State Archives: Dept. Agriculture and Stock. AGS/J1117 file 26509. 1936. Report to Under Secretary, Opossum season 1936, 1st July to 31st July, 29/12/1936.

Skin types

In the London markets, possum skins were classed by colour (blue, red, rusty, pale, dark or black) and size (small, large) and there were grades within each class (first, second, etc). Blue firsts were usually of highest

value (Agent-General Annual Reports), followed by reds and pales. Ringtails had similar grades and included a dark category. Dark Tasmanian possum skins were more valuable than the mainland grey skins (Froggatt 1904).

Names used for koalas in the London markets included "silvery bear" and "Australian bear"¹²¹. However, in Agent-General reports of the London sales they were most commonly called "wombat". In the London markets, koala skins from southern Queensland were valued more highly than those from central Queensland, which in turn were more valuable than northern Queensland skins¹²². Howlett (1979) claims that koala skins were marketed as "opossum" in north America. However, we could find no evidence of this practice in the reference material that we viewed. Koala and possum skins were clearly differentiated, and indeed it would be confusing to buyers to have two skins with markedly different properties labelled with the same name.

In Queensland sales, possum skins were classed as blue, red, black, rump or rumper, joey, damaged and ringtail. Blues were the preferred colour and brought the best price, while black was the least preferred colour. Bear skins were classed as small, medium, large and damaged. Within each class, possum and bear skins were graded as super, first, second, third, etc. Prices were quoted per one dozen skins.

Rumpers

In possums, "rumps" or "rumpers" referred to animals or skins in which the rump fur was not fully grown, which was said to occur in adult animals in winter, making the skins of less value¹²³. Rumpers were among the poorest quality skins. This is probably a condition described as rumpwear or lumbo-sacral dermatitis, apparently an allergic reaction to flea or mite infestation, with symptoms including baldness or matting of the fur, thickening of the skin and sometimes scab formation on the rump (Kerle 2001). Rumper skins were considered to be a significant economic problem as they sold at markedly lower prices. In coastal north Queensland in 1926, 50 per cent of possums were said to be rumpers¹²⁴. A trapper at Charters Towers, Mr E. Hewett, experimented with treating rumper disease by clipping their fur and washing them with "Condy's crystals", and claimed that it led to

an improvement¹²⁵. (In koalas, the terms "rumpus" and "rumper disease" probably referred to cystitis (Gordon and Hrdina 2005), and one report referred to juvenile koalas as "rompers"¹²⁶).

Wombat skins

In reports on the London fur markets by the Queensland Agent-General, koalas are commonly called "wombats". They are also referred to as "bears" in some of these reports, but the former name is much more common. Other sources also refer to koala skins as wombats. In 1925, Herbert J. Solomon Export Ltd, Sydney, wrote to the Department of Agriculture and Stock enquiring if the season for "Opossums and Wombats" would be opened in the coming winter¹²⁷. The Wild Life Preservation Society of Australia wrote in 1926 that, among exporters, "it was recognized and invariable to list the skins of Native Bears as Wombat Skins"¹²⁸. Dr. E.H. Anthony of the New York Museum of Natural History compiled statistics on skin imports to the United States for 1919/1920, which included 4,265,621 possums, 1,321,823 ringtail possums and 1,722,588 wombats, and stated that the koala was sold to the trade under the name "wombat"¹²⁹. This was the common trade name for koalas, particularly in overseas markets and possibly to some extent also in Australian markets.

It is not clear how the practice started, but possibly it may have been used to differentiate sales of Australian "bears" from true bears in the northern hemisphere skin markets. "Bear" or "native bear" was the common name for the koala when the trade commenced. The name "koala" came into common use later (see above). Alternatively, it may have been seen as a less sensitive marketing term than "koala". This practice appears to have been responsible for a belief among conservationists that trappers or dealers exported illegal koala skins disguised as "wombat" skins. For example, in 1929, Noel Burnett of Koala Park wrote to the Premier A.E. Moore saying that trappers marketed illegal koala skins as "wombat"¹³⁰. See also Phillips (1990, p 23).

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- ¹²¹ (1) Report of the Agent General for Queensland for the year 1915. Australian fur skins p. 13. Queensland Parliamentary Papers. 1916. Vol. II, p. 475. (2) Report of the Agent General for the year 1919. Australian fur skins. p. 11. Queensland Parliamentary Papers. 1920. Vol. II, p. 375.
- ¹²² (1) Report of the Agent General for Queensland for the year 1926. Furs, p. 15. Queensland Parliamentary Papers. 1927. Vol. II, p. 833. (2) Report of the Agent General for Queensland for the year 1934. Furs, p. 11. Queensland Parliamentary Papers. 1935. Vol. II, p. 815. (3) Report of the Agent General for Queensland for the year 1935. Furs, p. 14. Queensland Parliamentary Papers. 1936. Vol. II, p. 895.
- ¹²³ Queensland State Archives: Department of Agriculture and Stock. AGS/N350A file 08861. 1908. Memo from Stock Inspector McCarthy, 9/6/1908.
- ¹²⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/436 file 15150. 1926. Memo from Ranger W.R. Holmes re: regulation of open seasons, 14/9/1926.
- ¹²⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J110 file 80/1826. 1919. Letter from Mr E. Hewett about "rompers", 10/12/1919.
- ¹²⁶ Queensland State Archives: Department of Agriculture and Stock. AGS/J150 file 379. 1922. Memo from Stock Inspector R. Pusey to U/S Agriculture and Stock, 23/3/1922.
- ¹²⁷ Queensland State Archives: Department of Agriculture and Stock. AGS/J325, file 545. 1925. Letter from Herbert J. Solomon Export Ltd, 9/2/1925.
- ¹²⁸ Queensland State Archives: Department of Agriculture and Stock. AGS/J370 file 50. 1926. Letter from Wildlife Preservation Society of Australia, 9/3/1926.
- ¹²⁹ The Brisbane Courier, 21/7/1927, p. 9.
- ¹³⁰ Queensland State Archives: Department of Agriculture and Stock. AGS/J565 file 29/604. 1929. Letter from Noel Burnett re: Open Season for Opossums, 24/6/1929.

In the 1908 report, the Queensland Agent General in London wrote that wombat [i.e. koala] skins go to Canada for the manufacture of wraps¹³⁹. The report also noted that three factors would support a continuing market for Australian furs: the increased scarcity of fur bearing animals in all parts of the world due to over-harvesting; the demand for furs which had sprung up with the motor car; and increased buying by the Russians as their traditional sources were increasingly in short supply. In 1909, the Agent General reported that in Russia opossum skins were used for lining coats¹⁴⁰. People who could not afford beaver would take opossum. Possum skins were used particularly for trim, that is, collars and cuffs¹⁴¹.

In 1913, the Balkan war had an adverse effect on skin prices, as did the general financial stringency and mild winter¹⁴¹. Later, the Agent General reported a large demand for furs among the English working classes - sale prices for opossums in 1916 rose by up to 30 percent due to "extraordinary demand for furs in districts where munition workers, who earn high wages, are most numerous"¹⁴².

In 1919, the Department of Agriculture and Stock reported that the absence of Russians and Canadians from the fur market was "most favourable" for the Queensland market¹⁴³. In 1919, *The Brisbane Courier* reported, "before the war [i.e. World War I] Russia was a big market. Canada at one time was a purchaser of bear [i.e. koala] skins which were sold as ordinary trade lots, while they sold their own best as super quality skins. As both Russia and Canada are great fur-producing countries, the inference is that the Australian product is manipulated and sold under another name. Since the war skins have gone to various countries and the United States has come into the Market as a big buyer"¹⁴⁴.

The Agent General reported in 1924 that possum skins had appreciated in value since 1923 and that "Opossums have become very fashionable and are in strong demand not only in this country and on the Continent, but in New York as well". A London trader, Wilcox Mofflin, wrote in 1925 that "the Queensland Blue Opossum" had recently become a "Fashion Fur as distinct from their general use for Rugs, Linings and Trimming purposes"¹⁴⁵. Possums had become very fashionable in Britain, on the Continent and in New York. It was generally thought that open seasons were necessary to keep the market for Queensland possum skins

active. Dealers were worried that the closure of the season in 1925 would destroy the market through lack of supply, stating, "It is particularly unfortunate that, when an article has become so fashionable, the supply should vanish and if the animal has to be protected so much, it would have been far preferable to have close times alternate years and not two seasons open and two seasons closed"¹⁴⁵.

The Agent General in 1930 reported that values for fur were declining due to slackness of trade, a problem that was further complicated by the death of an important Leipzig fur merchant who financed by credit a large number of German and Polish dealers¹⁴⁶. His estate was being liquidated and the credits were called in not to be renewed, limiting the purchasing power of the German and Polish firms who had been principal buyers of Queensland opossums.

At the time of the 1931 possum season, skin prices were too low for a trapper to make an income in excess of his expenses. Following this season, an open season was not considered to be a viable proposition until the backlog of unsold skins cleared and prices rose.

In 1931, *The Daily Mail*¹⁴⁷ reported that an order had been sent to US customs collectors stating, in part, "You will not permit entry of skins of koala bears exported from Australia". Importation of koala skins was banned unless in compliance with provisions of section 527 of the United States *Tariff Act of 1930*. Although this came four years after the final koala season, it possibly helped to reinforce the decision not to open any more seasons.

In April 1933, the Acting Agent General in London reported that possum furs were now out of fashion and markets were poor¹⁴⁸. There were 460,000 unsold possum skins on the English market. The fur industry was greatly concerned over keeping the market share for possum skins and market interest in possums. This was one of the reasons for opening the possum season in 1936. Before the opening of the 1936 possum season, the Acting Agent General reported that enquiries from the Continent and Home Trade buyers indicated there would be a good demand for Queensland skins. He also stated there was likely to be a large demand for these skins in America. He stressed that it would be to the advantage of the states if they co-ordinated the supply of possum skins as this would ensure a fairly regular supply for the importers, and also allow for the

¹³⁹ Report of the Agent General for Queensland for the year 1908. Fur Skins p. 14. Queensland Parliamentary Papers 1909 Vol. II, p. 238.

¹⁴⁰ Report of the Agent General for Queensland for the year 1909. Fur Skins p. 14. Queensland Parliamentary Papers 1910 Vol. II, p. 238-239.

¹⁴¹ Report of the Agent General for Queensland for the year 1913. Australian fur skins p. 12-13. Queensland Parliamentary Papers 1914 Vol. II, p. 298-299.

¹⁴² (1) Report of the Agent General for Queensland for the year 1916. Australian fur skins p. 13-14. Queensland Parliamentary Papers 1917 Vol. II, p. 509-510. (2) Report of the Agent General for Queensland for the year 1917. Australian fur skins p. 12. Queensland Parliamentary Papers 1918 Vol. II, p. 1308.

¹⁴³ Department of Agriculture and Stock. Annual Report 1918-1919. Native Animals Protection Act p. 22-23. Queensland Parliamentary Papers, 1919.

¹⁴⁴ *The Brisbane Courier*, 11/3/1919.

¹⁴⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J325 file 545A. 1925. Letter from Wilcox Mofflin, 15/4/1925.

¹⁴⁶ Report of the Agent General for Queensland for the year 1930. Furs p. 17-18. Queensland Parliamentary Papers 1931 Vol. II, p. 741-742.

¹⁴⁷ *The Daily Mail*, 20/2/1931.

¹⁴⁸ *The Brisbane Courier*, 28/4/1933.

preservation of the possum, as individual states would only need to have an open season every two to three years.¹⁴⁹ London brokers believed that following a prolonged period of closed seasons, a great deal of interest was lost in our furs and other fashions were likely to be created.¹⁵⁰ In 1936, it was also reported by the Agent General that Italy was a closed market and Germany was having currency difficulties, which harmed the fur market.¹⁴⁹

After the last possum season, however, contrary to the Acting Agent General's expectations, overseas sales were poor. Following the season, a government memorandum to the Minister indicated that 2,026,272 possum skins had been exported to London and, in 1937, of over 2,000,000 possum skins that had been placed on the London market, approximately 500,000 sold, mainly of the higher grades.¹⁵¹ Demand had decreased markedly. The Agent General attributed this to the political situation in Europe and unsatisfactory financial conditions in America.¹⁵² In 1939, a large number of opossum skins still remained unsold on the London market due to the international situation.¹⁵³

Demand also dropped for koala skins in the 1930s. By 1934, the Queensland Agent General noted that many of the koala skins bought in 1927 had been bought "on spec" but no market had been found for them. They still lay in warehouses unsold. One firm was reported to have 50,000 unsold koala skins in its warehouse.¹⁵⁴

A file clipping of an article in *The Courier-Mail* of 18 November 1937, "Koalas Still Being Shot", carries a hand-written comment from a Department officer which includes the following remark, "As a matter of fact, Skins handled during the last open season for bears, still remain an incubus in the hands of the American interests that purchased large supplies and every effort made to dispose thereof has failed".¹⁵⁵ This information was expanded on in an article in *The Courier-Mail* the next day in which a leading Brisbane Hide and Skin Merchant is quoted as saying, "The last season for taking native bears was in 1927, when the skins averaged 4/6 [four shillings and six pence] each. Some skins taken then were sent to Canada to be sold. They were sent back to London, and returns for some of them, which had only reached Brisbane last week, averaged 9d [nine pence]".¹⁵⁶ The market for koala skins had disappeared. It was noted that firms that had bought koala skins in 1927 still had quantities unsold in their stores in the mid 1930s.

With the coming of World War II and the closure of the market for skins in London, demand for possum skins never regained its original volume. Koala and possum skins were never regarded as high class furs for the well-to-do, and after World War II, due to the depressed state of the economy world wide, fur coats were a luxury item for most people.

Skin prices

Under the 1924 Act, regulations were proclaimed providing for the collection of royalty on the sale of skins. From this time, information on the volume and price of skins sold in Queensland was more readily available. For earlier periods, the information on both koala and possum skins is often incomplete (Table 9). Data for particular years may be missing, or prices may only be available for part of a year or for particular skin grades. Price information for many years is available in reports and correspondence of the Department of Agriculture and Stock, reports of the Queensland Agent General in London and newspaper articles. Prices are usually given as the range obtained at sales in shillings per dozen skins, and sometimes as an average for a season. Prior to the introduction of decimal currency in Australia in 1966, the imperial system of pounds (£), shillings (s) and pence (d) prevailed. A pound comprised 20 shillings and a shilling comprised 12 pence. Values in shillings and pence were written as follows, e.g. seven shillings and sixpence: 7/6 or 7s 6d.

Approximate average prices per annum for high grade skins were estimated from available information on prices obtained in sales in Queensland and London by calculating the means of all available data (Figure 10). Because of the *ad hoc* and incomplete nature of the data, the average prices are approximations only. Prices could also vary greatly through the year due to fluctuation in demand. Annual averages do not reveal this variation.

Prior to protection under the Acts in 1906, prices were low. In 1889, prices received for koala skins at three sales in New South Wales ranged from 2s to 5s, and 2s to 6s, and 1s to 7s per dozen respectively.¹⁵⁷ Possum skins at three sales in 1889 were sold for 2s 6d to 9s, 12s 6d and 15s per dozen, respectively.¹⁵⁷ In 1903, possum skins in New South Wales averaged 9s per dozen (Froggatt 1904). Possum skins taken in 1897 in the Ballandean area in southern Queensland fetched slightly less than 5d each (5s per dozen) and before that prices were even lower (Fletcher *et al.* 1959). Koala skins at Ballandean were similarly low priced - skins taken by George Smith in 1896 sold for a little under 4½d each (4.5s per dozen) (Fletcher *et al.* 1959).

¹⁴⁹ Queensland State Archives: Department of Agriculture and Stock. AGS/J1079 file 3760. 1936. Letter from Queensland Acting Agent General to Minister for Agriculture & Stock, 14/2/1936.

¹⁵⁰ Report of the Agent General for Queensland for the year 1936. Furs p. 11. Queensland Parliamentary Papers 1937 Vol. II, p. 1009.

¹⁵¹ Queensland State Archives: Department of Agriculture and Stock. AGS/J1182 file 10426. 1937. Memorandum to the Minister for Agriculture and Stock re: opossum skin sales in London, 28/4/1937.

¹⁵² Report of the Agent General for Queensland for the year 1937. Furs p. 12. Queensland Parliamentary Papers 1938 Vol. II, p. 879.

¹⁵³ Department of Agriculture and Stock. Annual Report. 1938-1939. Wild Life Preservation. p. 15. Queensland Parliamentary Papers, 1939.

¹⁵⁴ Queensland State Archives: Department of Agriculture and Stock. AGS/J928 file 1984. 1934. Memo to the Minister for Agriculture, re: The opossum season, 28/5/1934.

¹⁵⁵ Queensland State Archives: Department of Agriculture and Stock. AGS/J1201 file 23359. 1937. Clipping from *The Courier-Mail* dated 18/11/1937 "Koalas still being shot".

¹⁵⁶ *The Courier-Mail*, 19/11/1937.

¹⁵⁷ *The Sydney Morning Herald*, 30/1/1889; *The Sydney Mail*, 22/6/1889; *The Armidale Express*, 5/3/1889.

During the three decades of harvesting in Queensland covered by the Fauna Acts, skins varied considerably in price, indicating the volatile nature of the industry (Figure 10). In late 1905 to early 1906, koala skins were sold for 1s 4d to 1s 5d each (16s to 17s per dozen) and possum skins for 6.5d to 7d each (6.5s to 7s per dozen)¹⁵⁸. Possum prices rose later in 1906. In 1908, koalas skins ranged in price from 8s per dozen for superior skins to 3s per dozen for seconds (the next grade down in skins)¹⁵⁹. By 1917, the prices had increased, although they varied from dealer to dealer.

*The Brisbane Courier*¹⁴⁴ reported prices for southern Queensland skins in 1918 as follows: "Only a few years ago opossum skins sold as low as 3/- or 4/- a dozen but in recent years the demand has increased considerably. Last season, for instance the average price for whole catalogues went up to 27/6 to 30/- a dozen while picked parcels of best blue opossums occasionally realised up to 100/- per dozen". The prices for koala and possum skins in 1919 and the difference between the prices paid by the various firms dealing in the skins are shown in Table 11.

Possum skin prices in the late 1920s ranged from 57s to 60s per dozen. In 1931 the price had dropped to 19s per dozen¹⁶⁰. The price of skins obtained in 1931 was down considerably on that of previous seasons, giving trappers a very poor return for their work and expenditure. The poorer prices were a major reason for the closure of the seasons until 1936. The price then rose to 37s 1d per dozen and the number of skins harvested increased by about 500,000. The low harvest in 1931 (Figure 9: Qld sales) correlated with the low prices obtained (Figure 10: Qld prices).

An indication of the range in price for the different grades of skins can be seen in the prices obtained at an auction in Brisbane in 1931 (shown as price per dozen skins). The best super blue possum skins brought 42s, first blues 36s, small blues 9s, super reds 30s, top rumps 18s, first damaged 4s, small rumps 3s, first black rumps 12s, and ringtails 1s¹⁶¹. At these prices it can be seen a large quantity of skins had to be, and were, secured for a trapper to make a worthwhile income. At that time the average male wage in the Commonwealth was £4 6s 10d per week (Commonwealth of Australia 1932).

Value of the industry

The skin harvest provided trappers with a relatively attractive income. During the debate on the 1906 Act, it was said that the average price of possum skins was 8s per dozen, which might equate to about £2 16s per week if a dozen were taken per day¹⁶². A man with three or four children could make £7 to £10 a week and be his own master (that is, employing child labour enabled the trapper to take a larger number of skins!). An instance was given of one man who made £900 in a season, bought a station and became a squatter¹⁶². Given a total sale by the dealers of 2,485,876 possum skins worth £592,096 in 1926, which were taken by 9040 trappers (Tables 7, 9), we may estimate that there was an average sale of 274 skins per trapper, and an average gross income (before costs) of £65 per trapper for nominally two months work. If, as was often the case, this was supplementary to other income, it can be seen that trappers could make a good income. At Rolleston in 1909, it was not unusual for possum trappers

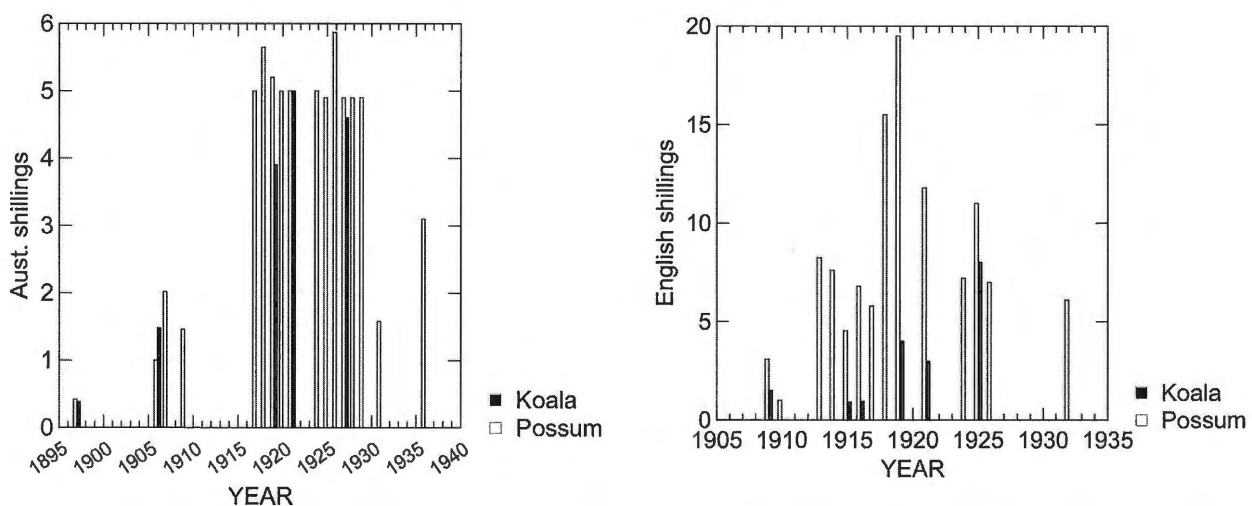


Figure 10. Prices received for koalas and possums in shillings per skin, at sales in Queensland (left) and London (right).

¹⁵⁸ Queensland State Archives: Department of Agriculture and Stock AGS/N350A. 1907. Undated note on the skin trade, re: Bill for Protection of Certain Native Animals.

¹⁵⁹ Queensland State Archives: Department of Agriculture and Stock AGS/N350A. 1908. Dalgety and Company, Brisbane marsupial catalogue, skin types and prices 7/4/1908. MacTaggart Bros. marsupial catalogue, skin types and prices, 7/4/1908.

¹⁶⁰ The Courier-Mail, 28/4/1933.

¹⁶¹ Queensland State Archives: Department of Agriculture and Stock AGS/J842 file 16510. 1931. Queensland Primary Producers Co-Operative Association Ltd, numbers, types and prices of skins sold at auction, 29/9/1931.

¹⁶² Queensland Hansard: Vol. 97. July to November, 1906. pp. 338-339. Fourth Session, Fifteenth Parliament. Legislative Council. 21 August 1906. Native Animals Protection Bill. Committee. Debate.

Table 11. Number of koala and possum skins sold by dealers in 1919 with price ranges. All firms are located in Brisbane unless otherwise noted.

Firm	No. possum skins	Price range per dozen in shillings and pence	No. koala skins	Price range per dozen in shillings and pence
Dalgety & Co., Brisbane	138,387	27s - 76s	27,945	35s - 66s
W. Mofflin & Co.	497,519	67s av.	110,716	48s av.
Wilcox Mofflin, Brisbane	300,000	20s - 70s	140,000	30s - 60s
Wilcox Mofflin, Rockhampton	272,000	30s - 80s	149,000	24s - 70s
Denhams, Rockhampton	24,466	50s - 61s 6d	22,148	40s - 62s 6d
Croston Bros	4,357	60s av.	96	45s av.
Moreheads	137,811	1s - 220s (av. 65s)	19,057	1s - 132s (av. 48s)
Sturmfels	23,720	44s - 85s	4,197	38s - 58s
Australian Mercantile Land and Finance	445	1s - 140s	138	1s - 63s
M. & A.W. Pinder, Rockhampton	921	55s av.	233	60s av.
Barnes & Coy, Warwick	92	10s - 160s		nil
Butcher Bros, Maryborough	1,096	55s - 65s	764	40s - 48s
Wilson & Canham	15,084	70s		nil
Mactaggart Bros	550,000	66s av.	109,000	45s av.
Fenwick & Coy	727,408	60s - 80s	191,983	40s - 60s
New Zealand Loan & Mercantile Agency	76,345	35s - 80s	42,834	35s - 65s
Australian Estates & Mortgage	62,420	53s 9d - 81s	21,461	40s - 63s
W.A. Gillmeister, Lowood	not available	30s av.		
Winchcombe Carson	194,289	30s - 96s 6d	25,434	26s 6d - 63s 6d
J.W.H. Turner, Rockhampton	24,604	43s		
J.W.H. Turner, Townsville	8,422	22s		
C.H. Mathias, Rockhampton	34,000	35s		

to make up to £120 in three weeks, which compared favourably with the **annual** salary of many civil servants and bank clerks ¹⁶³. A trapper known as Bally Wright at Nebo received a cheque for possum skins for one season that amounted to four figures ¹⁶⁴. Marshall Goody in an interview stated "In 1926, I made £700 - about £500 out of possums in two months, and the rest out of bullocks" (Johnston 1982). After World War I, returning soldiers found jobs in short supply, and the relatively high prices for skins attracted many to trapping when other work proved scarce. Froggatt (1904) stated that many people in Australia made their living from trapping and shooting opossums and other fur-bearing animals.

The harvest was also of considerable value to the economy. One firm in the twelve month period from 1 October 1905 to 30 September 1906 handled 102,428

koala skins worth £6,103, and 720,742 possum skins worth £29,136 ¹⁵⁸. It is estimated that in the year before *The Native Animals Protection Act of 1906* came into effect, a combined total of 3,450,000 skins of both species was sold over 12 months, to the value £131,000, mainly from Queensland ¹⁵⁸. One firm alone sold 850,000 skins to the value of £36,000 ¹⁶⁵. The annual value of the possum and koala harvests ranged from about £100,000 to £750,000 and £90,000 to £140,000 respectively (Table 9).

In the Annual Report of the Department of Agriculture and Stock for 1923-1924, the value of opossum and bear skins for the period 1919 to 1923 was compared with the value of gold to the State for the same period ¹⁶⁶. In years when there were open seasons, the value of skins was greater than or nearly equal to the value of gold (Table 12). Possum and koala skin exports often formed between

¹⁶³ Department of Agriculture and Stock. Annual Report 1908-1909. Native Animals Protection Act p. 35-36.

¹⁶⁴ Queensland State Archives: Department of Agriculture and Stock AG5/J201 file 2003. 1923. Memo from G. Ferguson, Assessing Land Ranger, Charters Towers, 12 Feb 1923.

¹⁶⁵ Department of Agriculture and Stock. Annual Report 1906-1907. Native Animals Protection Act p. 36. Queensland Parliamentary Papers 1907 Vol. II, p. 676.

¹⁶⁶ Department of Agriculture and Stock. Annual Report 1923-1924. The Animals and Birds Act p. 26. Queensland Parliamentary Papers, 1925.

Table 12. Comparison of the value of possum and koala skins with the value of gold exports, 1919 to 1923. Skin values show prices received by trappers. The data for 1919 include both species, whereas data for 1920–1923 include possums only. Values are in Australian pounds. Note that other sources give substantially larger totals for the 1919 harvest of koalas and possums (see Tables 9, 11).

Year	Number of Skins	Value of Skins in Pounds	Value of Gold in Pounds
1919	2,250,000	£550,000	£514,103
1920	3,000,000	£750,000	£489,462
1921	close season		£171,504
1922	1,131,442	£282,860	£342,300
1923	1,200,000	£300,000	£376,883

one and two percent of total exports from the State by value, and the possum skin trade was of sufficient value to Queensland to warrant a separate entry under fur exports in reports of the Statistics of the State of Queensland from 1920 to the early 1930s¹⁶⁷.

In 1931, unemployment due to the depression was such that the Queensland Government had passed an Income (Unemployment Relief) Tax Act to provide finance for the unemployment relief schemes. This included a special tax on all income at the rate of 3d in the pound. Possum trapping was of sufficient value to the economy for it to rate a special notice concerning the collection of this unemployment relief tax in 1931 (Figure 11). It was pointed out in the notice that the Government had given the trappers the opportunity of earning income to help tide them over the depression and that Government had made special arrangements for trappers whereby the tax was collected by the person making the payment to the trapper. By the last season in 1936, this tax was no longer in force.

Conclusion

Why did the harvests start?

The koala harvest started in response to the great increase in abundance of koalas. A similar increase in possums probably also led to the possum harvest. Initially, economic pressures on struggling rural dwellers provided ample reason for becoming involved in the harvest. In the early 1900s, a third reason for engaging in the harvest emerged when there was an increase in the value of skins, such that harvesting became a relatively prosperous undertaking. The coming to power of the Labor Party, with its rural voter base, was probably a significant factor in the continuation of the koala harvest past 1915. Koala abundance also remained high in Queensland well after it had declined in the southern states (Gordon and Hrdina 2005), ensuring that koalas could be taken in large numbers. This was probably the major factor in ensuring the koala harvest continued in Queensland after it had terminated in the southern states.

The possum harvest was operated as a regular industry, with open seasons held in two years out of three. Departmental correspondence and reports indicate that the major factors that influenced the declaration of open seasons were the state of the markets and surveys of possum abundance. Economic conditions (unemployment levels and drought) were probably also influential. Governments had more reservations about the koala harvest. There were few open

seasons, usually at wide intervals. The opening of koala seasons was probably much more strongly influenced by political considerations (lobbying for a harvest by trappers, versus community opposition to a harvest). There was also strong and persistent public service opposition to the koala harvest, and to a lesser extent to the possum harvest.

Wildlife management

The Department of Agriculture and Stock attempted to manage the trade as a sustainable harvest, with regular assessment of abundance and determination of seasons in response to abundance levels and market conditions. This was supported by population conservation measures based on the establishment of reserves and attempts to conserve populations with a restocking (translocation) program for both koalas and possums. It was viewed as a significant part of the State economy that should be fostered.

The key practices used in managing the harvest were close seasons and a primitive form of population monitoring (surveys of the opinions of government officers), supported by a range of other measures, which were possibly of less practical effect, including establishment of reserves. The duration of open seasons also became shorter over the harvest period in an attempt to restrict the size of the harvest. The legislation also provided power to close the harvest totally, and governments demonstrated a resolve to make use of this power. Management of the harvest relied on indirect control measures – mainly close seasons and reservations. More direct measures (e.g. detailed population monitoring, numerical limits to the size of the harvest), typical of modern harvest programs, were never used in the regulation of the industry. However, the management approach used for koalas and possums was successful to the extent that it undoubtedly limited the harvest to a level well below that which would otherwise have prevailed.

Timing of open seasons within years was determined by periods of peak fur condition (that is, centred on winter months) and trapping was unselective. It was difficult to avoid taking, for example, juveniles or breeding females. Instead, close seasons and reservations were used in an attempt to enable populations to recover from harvests.

An effort was made to involve the community in management of the industry through the appointment of Opossum Boards in 1926, directly responsible for management of trappers. However, this was eventually abandoned, when the Department of Agriculture and Stock reverted to a more traditional administrative model in 1937.

¹⁶⁷ Registrar General. Statistics for the State of Queensland. Government Printer, Brisbane. Issues for the years 1901–1936.

NOTICE TO OPOSSUM TRAPPERS

For the purpose of relieving unemployment, which has prevailed throughout Australia, and also in Queensland, the Government found it imperative to undertake relief works.

These relief works have proved very effective in affording employment to large bodies of men with families to support, and in relieving large numbers of cases of distress, but, unfortunately, owing to the depression, it will be necessary that these relief works be continued for some time to come.

To provide the revenue to finance the scheme, the Government passed an Income (Unemployment Relief) Tax Act under which all income earned in, or derived from, any source in Queensland, and consisting of earnings, salaries, wages, &c., was made subject to a tax at the rate of 3d. in the £.

In ordinary circumstances a return of the amount earned by opossum trappers in the sale of opossum skins would have to be furnished to the Commissioner of Taxes by whom the tax would then be assessed and collected.

However, to avoid inconvenience with regard to trappers, an Order in Council was recently issued by and under the Income (Unemployment Relief) Tax Act whereby it was prescribed that the tax would be collected by the person making the payment to the trapper, and all persons who buy skins from trappers, or who sell skins on trappers' account, are required by law to deduct the amount of the tax from the payments to the trappers and to remit the sum to the Director of Labour.

Hence you will understand that the small amount deducted from the payment made to you by the Selling Broker or Skin Buyer, as the case may be, is done in pursuance of the Order in Council, and this amount—just as much as other sums collected by way of this relief tax—is being applied by the Government to the relief of destitute persons by providing them with employment.

In conclusion, it might be pointed out that the opportunity of earning income from trapping opossums has been given by the Government for the purpose of helping trappers and others to tide them over the present position.

20th August, 1931.

Department of Labour and Industry.

Figure 11. Notice with information on unemployment relief tax. (Queensland State Archives: Department of Agriculture and Stock. AGS/J842 file 16510. 1931.)

Why did the harvests stop?

The koala skin industry was brought to a halt through a combination of community pressure, concern over the disappearance of koalas from many areas where they had previously been plentiful, and official concern about the survival of the species, supported by survey results. The fight against the koala harvest was to all effects won in 1919, when the first public campaign against it was mounted. The 1927 open season, although it aroused more controversy, really represented the dying gasp of the koala industry. Fur markets were still strong after the last koala harvest, and market conditions do not seem to have been a significant factor in halting the koala harvests. The great decline of koalas in southern Queensland around the turn of the century and soon after, possibly for reasons unrelated to the harvest (Gordon and Hrdina 2005), was probably the initial factor leading to the eventual close of the koala harvest. This decline created such alarm about the status of the koala that closure of the industry was only a matter of time. The presence of significant opposition to the harvest among the rural community, from grazier interests in particular (as well as among the urban population), was probably also a major factor. If the rural community had been united in support of harvests, it would have been much more difficult for governments to close them. A comparison may be made with the continuing kangaroo harvests in Australia, which have very strong rural support and have continued despite the presence of sometimes significant urban opposition.

The main factor leading to cessation of the possum harvest after 1936 was the poor state of the fur market, aided by developing community opposition.

The motivation for opening and closing koala seasons, particularly in 1927, was complex. The political, and some of the economic, motives behind the 1927 koala season were discussed by Donegan (2000). Marshall (1966) attributed the decision to open the koala season in 1927 primarily to vote-seeking by the Government. However, the motivation for the 1927 koala season seems to be more complex than those authors suggest. The real emphasis of the industry was on the possum harvest, not koalas. Possums were more abundant, could be harvested in greater numbers, were of more value to the economy (Table 9), and their skins generally fetched higher prices (Figure 10). Koalas were not a very significant part of the trade if the koala take is viewed over the entire harvest period. For governments interested in economic development, the major economic benefits came from the possum trade, not the koala trade. It is likely that the folklore of the time is correct, that is, that the 1927 koala season was only opened to allow trappers to dispose of skins they had taken illegally during the close season. Alternatively, it may have been due to particularly effective lobbying by Thomas Foley. It also coincided with improving population status of koalas in central Queensland (Gordon and Hrdina 2005), which must have influenced the Government's decision, allaying concerns over extinction of the koala.

Value to the economy

The harvests were of significant economic value, both for the State and for the people that were involved in the industry. They were of immense economic importance to struggling selectors and rural workers. However, they were probably ineffective in providing work for the unskilled unemployed, which was partly an aim of the harvest, whereas they probably helped in preventing more people moving onto the unemployment lists. The harvests were very profitable while higher skin prices were obtained, but profitability deteriorated greatly when markets slumped. Ultimately there has to be an economic justification for a harvest if it is to succeed. Volatile markets and uncertain supply can critically affect profitability.

Failure of the industry

As industries, the koala and possum harvests were highly successful in the short term, but were ultimately failures. The failure resulted mainly from two factors, strong community opposition and deterioration in markets (i.e. demand). In addition, for the koala at least, sustainability of the harvest was also suspect. If the harvest had continued longer, it may have been necessary to reduce the take substantially (Gordon and Hrdina 2005). Harvests may fail if they lack acceptance by the community. The koala harvest largely lacked this acceptance in the later years. Even current proposals for limited koala population culls for management purposes are rejected by Governments who are more aware of community perceptions than are many wildlife managers. Although there was also community opposition to the possum harvest, it may not have been a critical factor for that harvest, as a possum trade still survives in Tasmania, despite some community opposition.

The lack of full support in the rural community was probably also an important negative influence on Government attitudes to the harvest of both koalas and possums. In contrast, the controversy over the Queensland macropod harvest in the 1960s and 1970s, was characterised by a strong city versus country split in attitudes. The strong rural support for kangaroo harvesting was undoubtedly important in enabling that harvest to persist. The concept of sustainable use includes social, economic and political components as well as biological components (Campbell 2002). Bennett and Robinson (2000, cited in Campbell 2002) list three criteria for sustainability of hunting wildlife in tropical forests: (1) harvests must not exceed production; (2) the management goals must be clearly specified; and (3) the biological, social and political conditions must be in place that allow an appropriate use and effective management. The koala and possum harvests failed to meet the third criterion in particular, particularly with regard to social and political conditions, as they came to lack community support and eventually political support.

One of the key issues in maintaining community support for wildlife harvests is access to accurate population data on the target species. This enables wildlife managers to demonstrate clearly that a harvest is (or is not) sustainable. Such information was lacking in the early 20th century.

Fluctuation in demand is a perennial problem for wild harvests, and also for many other commodity markets. Demand in the fur market was strong for a relatively short period only, from the early 1900s to about the 1930s. It was relatively weak before and after this period. An expectation that demand will continue over the long term should be a pre-requisite for any attempt to develop sustainable wild harvests. Another important problem for participants in the industry was their inability to ensure a regular supply of the product and maintain market interest, as open seasons were held irregularly.

Conservation through sustainable use

Ecologically sustainable wild harvest is often advocated as a conservation measure. Giving a species an economic value is thought to generate attempts to ensure supply of the product, thereby giving the species a conservation value and stimulating attempts to conserve it. Bolton (1997, p 254-62), McCallum (1995) and Freese and Trauger (2000) discuss the complexity that underlies this seemingly simple concept. In practice, however, commercial use of wildlife may have different effects in different cases, ranging from stimulating conservation efforts in the wild, or having nil impact, through to putting increased pressure on wild populations. Open-access wildlife resources of great market value are very susceptible to over harvesting (Freese and Trauger 2000). In addition, uncertainty about the future (due to fluctuating demand, or fluctuation in population size of the harvested species) also creates incentives to over harvest (Freese and Trauger 2000). Possum harvesting would have been influenced by both of these factors in the early 20th century. Government officials were the main group that came to view koalas and possums as worthy of conservation because of their economic value, and they implemented conservation measures to support the sustainability of the industry. These efforts were partly

responsible for the establishment of the Queensland wildlife sanctuaries, the forerunner of some of the present conservation reserves in Queensland, although, it should be noted that the establishment of sanctuaries only prevented the taking of animals and did not prevent clearing of habitat.

The trappers, on the other hand, never saw koalas and possums as possessing any such conservation value, and their attitudes toward the species remained wholly exploitative. In a situation where open seasons occurred irregularly, demand fluctuated greatly, there was no ownership of the resource and trapping usually only provided a supplement to other income, it may have been economically rational to concentrate on maximising the take rather than to attempt to conserve the resource. Professional trappers, who lived fulltime off mammal harvests, may have felt differently, but we have no information on their attitudes.

The economic value of the harvests never resulted in the development of the concept of a conservation value (to ensure a supply of animals to support further harvesting) among the general community either, because community concern over conservation and other issues lead instead to demands for a total ban on the harvests, particularly with respect to koalas. The industry therefore did not generate any significant conservation benefits for koalas and possums. Hypothetically, the development of a sustainable possum harvest might require that Governments at that time had attempted to design a harvest that gave more rights over the stock to trappers, perhaps with restricted entry to trapping. Such an industry might then have been able to generate conservation benefits for possums. However, the development of such an industry would have been unrealistic in the social and economic environment of the early 20th century, and failure of demand would have eventually killed the industry anyway.

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APPENDIX I Summary of possum-mistletoe trials¹⁶⁸

The trials were conducted in the Moggill State Forest, Brisbane, in a specially constructed enclosure, and in captivity at Maroochydore. Several groups of possums *Trichosurus vulpecula* trapped in the wild were used at intervals, and photographic records were kept of the condition of the plants. Mistletoe growing outside the enclosure was used as a control. Previously, forestry officers were sent a questionnaire about the effect of possums on mistletoe, which resulted in mixed views, but favoured the idea that possums and koalas had a role in the control of mistletoe. Only those species of mistletoe that commonly damaged hardwood forest were used in the trials. The most common were *Loranthus vitellinus* and *L. pendulus*. When species of mistletoe from rainforest trees were offered to koalas they were refused. When offered mistletoe and eucalyptus at the same time, *L. pendulus* was taken sporadically and was the only species eaten. Koalas were found to have preferences for mistletoe taken from eucalypts. When koalas at Lone Pine were offered *L. pendulus* from various sources, they selected that from eucalypts. When mistletoe was eaten, considerable quantities were eaten. The koala was found to be only a spasmodic feeder on mistletoe. Possums were found to have a fondness for mistletoe and preferred it to their usual diet. They were particularly fond of the berries, eating berries at all stages of maturity from species of *Loranthus*, *Notothixes* and *Viscum*. As well, they ate the flowers and were also found to eat with relish the red insect galls on the eucalypt leaves. They were also found to gnaw the "sinkers" [roots?] of the mistletoe out of the tree.

¹⁶⁸ Queensland State Archives: Department of Agriculture and Stock, AGS/J1190 file 14462. 1937. Report on mistletoe as a food source for possums, from H.E. Young to Secretary Sub-Department of Forestry, 11/11/1937.